FEEDSTUFFS®

★ A WEEKLY NEWSPAPER ★

FOR THE FEED MANUFACTURER, JOBBER, BROKER and DEALER

Volume 30—Number 52 | DECEMBER 27, 1958 | 1 Year $5, 2 Years $8

Survey Reveals Plans and Hopes for 1959

By GEORGE L. GATES and ROGER BERGLUND
Feedstuffs Staff

MINNEAPOLIS—Formula feed manufacturers anticipate a significant increase in tonnage during 1959, although most of them do not expect increases to match the big gains in volume racked up during 1958.

This conclusion is based on analysis of responses to a survey conducted by Feedstuffs this week. Executives of feed companies were asked to report a comparison of their 1958 volume with 1957 volume and also to forecast their business expectations for the coming year. A total of 35 participated.

Tonnage of these feed manufacturers averaged 13% higher in 1958 than in 1957. Looking ahead to 1959, feed manufacturers expect an increase in volume averaging close to 9%, this survey indicates.

The outlook for profits, perhaps more difficult to predict, shows a mixed picture. Nine of the respondents look for profits at about the same level as in 1958, ten anticipate higher profits and seven expect that profits will be lower.

The Feedstuffs survey revealed a great deal more about how feed manufacturers regard the outlook for 1959 beyond tonnage and profit prospects. Their answers to a number of questions relating to ways of doing business and "outside" factors likely to affect their situation in 1959 indicate a great

(Turn to SURVEY REVEALS PLANS AND HOPES, page 83)

Official Sees More Stable Swine Output

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — Responsible observers in government circles have set forth an analysis of the pig crop report which includes some favorable news for the swine and feed industries.

For one thing, the currently indicated increase in the 1959 spring pig crop will be somewhat smaller than had been expected earlier.

Of major importance, too, is the fact that the bigger pig crop will be more favorably spaced over the spring pig crop period (December, 1958-May, 1959). As a result, one U.S. Department of Agriculture expert pointed out, fears of radical hog price declines late in 1959 and running into 1960 are unlikely to be realized. He forecasts that real price stability will be realized in 1959 and early 1960, although at possibly lower—but not disastrous—levels.

(Also see USDA pig crop details elsewhere on this page and tables on page 8.)

More Even Marketing

It is more clear that farmers collectively are achieving a greater lev-

(Turn to STABILITY, page 8)

Mid-South Plan To Boost Swine Production Told

MEMPHIS, TENN. — Mid-South farmers will be urged to cash in on a $53 million hog industry under a promotion program launched at Memphis by agricultural and packing house officials from Tennessee, Mississippi and Arkansas.

A meeting called by Edmund Orgill, Memphis mayor, to explore means of encouraging more hog production, brought formation of a committee charged with mapping a program that would reach individual farmers and packing houses in the Memphis area.

Heading the committee was Hu-

(Turn to MID-SOUTH, page 4)

FEEDSTUFFS *Features This Week*

OUTLOOK

The year 1959 promises both opportunities and problems for feed men concerned with maintaining and improving their positions in a changing agriculture and feed industry. The continuation of progress for the industry and its individual manufacturers and dealers will demand the best in planning and carrying out the various operations of feed businesses. Effective programs of production, marketing and service will be required. To provide some guideposts as the industry moves into a new year, Feedstuffs has assembled outlook information, comments and suggestions on all phases of the feed business. Experts in various fields point out the challenges and stimulate thought, planning and action for 1959 and succeeding years.

NUTRITION: What's next in nutrition, with particular attention to the role of drugs in feeds, is discussed by well known industry scientist Dr. J. E. Hunter. See **page 10.**

INTEGRATION: A leading authority on contract agriculture, economist Dr. G. B. Wood, raises questions and offers suggestions for feed men as he views developments in connection with the much-discussed and controversial topic of integration. **Page 18.**

BUSINESS VOLUME: Economist Francis Kutish provides clues to feed business prospects in the coming year as he examines the 1959 livestock and poultry outlook. **Page 20.**

FEED PRODUCTION: Discussing trends in feed production, feed company president Fred W. Hoover, Jr., emphasizes the importance of providing the "lowest cost" feeds at point of production, at destination and in conversion. **Page 28.**

SALES AND SERVICE: The feed man has a real job in serving a changing market. Industry executive I. S. Riggs provides some suggestions and comments on improved sales and service. See **page 32.**

FINANCING: One of the industry's currently most importan problems has to do with financing of feeder needs and the questions of who and how in providing credit. Officials of both a feed company and a bank discuss this subject. See articles by J. D. Sykes on **page 40** and Douglas F. Graves on **page 52.**

INDUSTRY'S FUTURE: AFMA market researcher Oakley Ray provides a close look at the feed manufacturing industry—today and tomorrow. See **page 56** for an analysis of current size and competition, future tonnage growth and contract agriculture.

MANAGEMENT: No company is any better than the executives and people in it. Advice on "building management for tomorrow" is provided by business management consultant James H. Burrell on **page 60.**

GENERAL OUTLOOK: The climate in which feed firms will operate in the coming year—the general business and agricultural situation—is forecast by economist Leonard W. Schruben on **page 70.**

— REGULAR FEATURES —

Putting Research to Work	12	Feedstuffs Index	76
Joe Brooks	14	Convention Calendar	78
Feed Service Bulletin Board	44	Feed Control Comment	82
Worth Looking Into	64	Feed Markets in Detail	84

13% Larger Spring Pig Crop Seen

WASHINGTON—A spring pig crop of 59 million head has been predicted by the U.S. Department of Agriculture on the basis of a recent survey of hog farmers. This is an increase of 13% over the spring crop of a year ago and the largest spring crop since 1951.

Reports on breeding intentions indicate a total of 8,317,000 sows to farrow for the spring pig crop, an increase of 12% over the number farrowing a year earlier.

(Also see tables on page 8.)

"If the intentions materialize," USDA said, "and if the number of pigs per litter equals the 10-year average with allowance for upward trend, the 1959 spring pig crop would be 59 million head."

While a crop of this size is the highest since 1951, it is somewhat less than expected earlier and it eases the fear of a price next fall at extremely low levels.

The report points out, however, that the fall crop in 1958 was 42.5 million head, 17% larger than last year and the largest fall crop since 1943. The increase of 17% was 2% greater than the 15% increase in fall pigs predicted by USDA last September.

The total pig crop for 1958 was

(Turn to PIG CROP, page 8)

1958 Crop Output Sets New Record On Fewer Acres

WASHINGTON—American farmers have produced in 1958 an all-time record output of crops from the smallest planted acreage in 40 years.

This was reported this week by the U.S. Department of Agriculture in its annual crop summary, which said record high yields per acre brought about total production which exceeds the previous record by 11%.

New yield-per-acre records were set by corn, wheat, oats, soybeans, barley, rye, sorghum grain and silage, rice, cotton, hay, peanuts, potatoes, sweet potatoes and tobacco.

Production totals, even though held

(Turn to CROP, page 86)

FEEDSTUFFS®

A Weekly Newspaper Published by
THE MILLER PUBLISHING CO.
2501 Wayzata Blvd., Minneapolis, Minn.
Address Mail to:
Box 67, Minneapolis 40, Minn.
Telephone FRanklin 4-5200
All Offices Serviced by Bell System Teletype

EDITORIAL STAFF—George L. Gates, Editor; Roger Bergiund, Managing Editor; John Cipperly, Washington Correspondent; Emmet J. Hoffman, Merchandising Editor; John S. Franklin, James E. Sharon and James H. Ross, Editorial Assistants; Duane F. McKenzie, Research Director.

WASHINGTON CORRESPONDENT—John Cipperly, 604 Hibbs Building, Washington, D. C., Telephone, Republic 7-8534.

ADVERTISING STAFF—Wilfred E. Lingren, Advertising Director; Carl R. Vetter, Advertising Department Manager; Bruce A. Kirkpatrick, Advertising Production Manager; Leland C. Hubert, Assistant Advertising Production Manager; R. Dale Swenson, Promotion Manager.

BUSINESS STAFF—Martin E. Newell, Chairman of the Board of Directors; Milton B. Kihlstrum, President and Treasurer; Wilfred E. Lingren, Executive Vice President; Don E. Rogers, Vice President; Paul L. Dittemore, Vice President; Donald G. Neth, Secretary; T. A. Gaden, Circulation Manager; James G. Pattridge, Assistant Treasurer; Richard L. Ostlund, Office Manager; Walter O. Buchkosky, Production Superintendent.

BRANCH OFFICES—SOUTHWEST, Martin E. Newell, Manager; Thomas E. Letch, Assistant Manager, 612 Board of Trade Bldg., 1005 Wyandotte St., Kansas City 5, Mo. (Tel. Victor 2-1350); EASTERN STATES, Paul L. Dittemore, Manager; George W. Potts and James W. Miller, Advertising Sales Representatives, Suite 3214, 551 Fifth Ave., New York 17, N. Y. (Tel. Murray Hill 2-2185); CENTRAL STATES, Don E. Rogers, Manager; Henry S. French, Assistant Manager; Amos W. Standish, Advertising Sales Representative, 2832 Board of Trade Bldg., 141 W. Jackson Blvd., Chicago 4, Ill. (Tel. Harrison 7-0515); NORTHWEST, Paul A. Anderson, Advertising Sales Representative, P. O. Box 67, Minneapolis 40, Minn. (Tel. Franklin 4-5200).

Correspondence regarding subscriptions, changes of address, etc., should be sent to Circulation Manager, Feedstuffs, Box 67, Minneapolis 40, Minn. Single copies 50¢. Subscription rates: One year $5, two years $8, in the U.S., U.S. possessions, Canada and Pan-America. Add $3 a year for postage to other countries. Readers are urged to give prompt notice of change of address and to anticipate future changes by at least two weeks' advance notice. Ask postman for form 22-S. Feedstuffs accepts subscriptions only through its own offices; no subscription solicitors are employed or recognized. Associated publications: The Northwestern Miller, The American Baker, Milling Production, Croplife, Farm Store Merchandising.

Entered as second-class matter Feb. 25, 1947, at the post office at Minneapolis, Minn., under the Act of Mar. 3, 1879

The regional circulation of this issue is concentrated in the southeastern states

Ready for 1959?

FEEDSTUFFS HAS JUST COMPLETED its second annual year-end chat with a number of feed manufacturers. It has been a rewarding visit, from the standpoint of facts and observations learned during the conversation, and also from the standpoint of gaining a renewal of confidence in the over-all bright prospects for the industry's future. Such confidence seldom is in doubt, but now and then revitalization is especially welcome, particularly in an era of great debates about methods of doing business and during times when some types of industry operations are ringing up minus signs on the cash register.

The visit referred to is one conducted annually by this publication with assistance of the U.S. mails. It is regretted that it can't be conducted face to face. The answers to our questions appear in a story starting on page 1.

THE INDUSTRY'S THINKING, at least a representative segment of it, is reflected in these answers. One of the more prominent facts learned in the sampling of opinion is that manufacturers are somewhat less optimistic about prospects for increased tonnage in 1959 than they were a year ago, when the first of these surveys was made. Actually, in averaging out the forecasts a gain in tonnage for 1959 of about 9% is indicated. Last year at this time these forecasts averaged out to about 10%. The difference here is not "statistically significant," as the scientists say, but when the anticipated increases are evaluated against the background of 1958 experiences, the more cautious attitude is apparent.

On the average, manufacturers participating in the survey showed an increase of 13% in volume in 1958 as compared with 1957. What the actual gain in tonnage this year ultimately will prove to be will not be known until the results of some more precise surveys are known. However, it appears that the gain in feed business this year could be somewhat near this level.

Worth noting here is that a number of manufacturers who showed increases well above the average in 1958—ranging up into the 20% increase bracket—look for smaller boosts in 1959.

This by no means indicates lack of confidence. It does indicate possibly that the excellent volume of 1958 was probably better than had been expected by many concerns. Also, it indicates that manufacturers are reading the signs of the times—such signs as the prospect for lower hog and egg prices and the necessity for cutting back on broiler operations. Those who plan ahead will take these prospects into consideration, and when the figures are added up next year, there is little doubt that manufacturers with the best sign-reading ability will show the most profitable operations.

PROBABLY AS ENCOURAGING to over-all industry prospects in 1959 as the anticipated gain in volume is the determination of manufacturers to upgrade their sales methods. Those who participated in the survey plan to step up service programs, do more selling on farms, help their dealers do a better job and offer management assistance to feeders.

The subject of integration, which has occupied so much of the industry's thoughts in the past year, naturally provides a springboard for much lively comment in the survey responses. Readers will be interested in the way their fellow manufacturers are reacting to this development. Here is a pair of interesting comments on this and related subjects:

"We will swing with the punches—trends—habits—actions—but not damn fool credit."

"These changes tend to stimulate greater creative thinking which, in turn, will result in new and different programs designed to mesh with modern agriculture."

Undoubtedly, rolling with the punches that 1959 is certain to deal out will be the industry's chief tactic in the days ahead, as it has in the past. It could get clipped a time or two in vulnerable spots, but prospects are that the industry will be in the ring still looking sharp through its perspiration at the end of Round 12 next December. Good luck!

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Holiday activities slowed down feed business slightly this week, but representatives in most parts of the country indicated that it was merely a temporary lull. Only the Southeast part of the country, where broiler prices continue in the neighborhood of 14¢, reported business to be slow. The Northeast also had lagging broiler feed business caused by low prices. In other areas, however, demand continued to be good, and in the Mountain States, steadily increasing numbers of animals in feedlots brought sharply improved business over the previous week. The index of feedstuffs prices Dec. 22 was 93.7, an increase of 2.2 points over the previous week and sharply ahead of the 72.7 a year ago. The feed grain index was 64.1, compared with 64.4 a week earlier and 62.6 a year earlier. (Ingredient prices in detail on pages 84-86.)

Northwest

Feed business was termed "good for a holiday week" by feed mill representatives, who were more interested in talking about the month of December generally.

They said it will end up very well—far ahead of December a year ago. For some the month was expected to set a December record.

A sight easing in ingredients prices was noted during the week, although protein feeds were still scarce and expensive, and feed mill representatives were mixed in their reactions. One said he expects the feed business generally to ease off during January. Another felt the easing in ingredient prices was what the industry needs to keep farmers interested in good feeding practices during coming weeks.

Dairy, cattle and hog feeds continue to lead in sales. Demand for hog feeds has been surprisingly good all year, representatives said, while poultry feeds, primarily egg feeds, have been down in volume. One representative said he is convinced the percentage of all feed going to hogs this year will show a good increase, while the percentage of poultry feeds is likely to be down.

Mills closed for Christmas Day, but some were working into the weekend to meet demand. Prices for the coming week were held unchanged or increased slightly.

Southwest

Formula feed business is a little slower this week, but only, it seems, because of the holiday atmosphere that prevails. Mills are operating on various schedules. Some were down Dec. 24 and 25 while others were down only Christmas Day. And there are plants that are operating Saturday along with overtime shifts to keep the backlog from getting too large for the upcoming New Year week.

Swine and steer feed make up a sizeable share of the volume with poultry feed reported to be in good demand by several mills. Broiler prices are continuing at a low level, but the birds that are already placed continue to eat so that business has not fallen off.

General dealer business has suffered slightly this week as people occupied themselves with other holiday activities after having stocked up a little heavier the previous week. This holiday tone will probably continue in a more limited way next week with the pace stepping up considerably the following week as dealers build up inventories again.

Prices are expected to be unchanged to up $1 for next week.

Northeast

The recent cold, stormy weather failed to stimulate as much demand as the trade had anticipated and sales of formula feed were "just fair."

Dairy feeds remained as top sales leaders, with both concentrates and complete feeds doing well. Egg mashes ranked second; broiler feeds continued to lag and turkey feed demand has virtually disappeared, except for breeding flocks.

Milk continues to bring a good return and dairymen are about the only farmers to show a profit from their operations. Eggs held about steady. Low prices persisted in the broiler market in the East, with levels averaging out at 14¢ lb. Some quotes were down to 13¢ and a limited number reached 15¢.

There are a lot of chicks being put in, both for laying flocks and broilers, that future markets will have to contend with, but expected lower feed prices will help growers.

Corn was off 1 to 2¢ during the week and further declines are likely. Oats held steady after an early ½¢ dip. Barley was unchanged to 1¢ lower and feed wheat held steady.

Animal tallow continued to slide, with another ½¢ decline.

Soybean oil meal had quite a strong undertone but prices held unchanged. Linseed oil meal continued to be practically unobtainable and prices climbed $3 to $4. Gluten meal advanced $2 and cottonseed oil meal held steady.

Meat scraps advanced another $2.50 as western buying bolstered prices. Fish meal continued scarce but prices held unchanged.

Alfalfa meal gained 50¢ to $1. Hominy edged up but backed down and ended unchanged. Gluten feed rose $2; brewers' grains advanced 50¢ to $1 and distillers' grains were unchanged to $1 higher.

Bran and middlings wilted under pressure to make sales during the holiday lull. Both declined $3. Red dog was off $1.

Running time of formula feed manufacturers averaged 32 hours in the holiday-shortened week, with one or two mills planning to work an additional eight hours.

Southeast

Although feed business is excellent in other parts of the nation, there has been very little change in the Southeast.

Most of the feed mills have an inventory problem at the end of the year and are doing their best to get stocks down to a minimum. Ingredient buyers have no faith in the present asking prices for the major feed ingredients and many believe that we are due for a decline after the first of the year. Purchases are only being made on a hand-to-mouth basis.

The north Georgia broiler market remains unchanged at 14¢ lb. f.o.b. farm. With present costs of poultry feeds, no profit can be realized at this time. Broiler replacements for the week of Dec. 13 were down 133,000 from the previous week.

The corn market in Georgia is unchanged with very little offerings.

(Turn to MARKETS, page 83)

The Case of the Talking PIGS

THE RESULTS OF THIS INDEPENDENTLY CONDUCTED TEST SPEAK FOR THEMSELVES

1. One to two pounds of SUCRO FLAVOR replaced 400 pounds of sugar
2. Saved $15 per ton of feed
3. Pigs on SUCRO FLAVORed feed made higher daily gains
4. Pigs ate more SUCRO FLAVORed feed—feed efficiency improved!

Pigs can tell you a lot about SUCRO FLAVOR . . . the sweet concentration of taste proven feed flavors, sweeteners and BHT antioxidant in soluble powdered form. It adds new appetite stimulating aroma and gives feed a fresh, long-lasting sweet taste. There is no objectionable after-taste common with ordinary saccharin. Appetite fatigue common with excessive amounts of plain sugar is eliminated.

The high palatability control of SUCRO FLAVOR was first proven in laboratory tests with small animals. Now independent control feeding tests and actual on-the-farm results give new proof of feeding performance.

Use 1 to 2 pounds SUCRO FLAVOR per ton of starter feeds; ½ to 1 pound per ton of grower and finisher feeds.

SUCRO FLAVOR makes better creep feeds, better starter feeds, better wormer and other medicated feeds, better high fat feeds, better mineral feeds, better sweet feeds. Makes old fashioned "high sweet" feeds obsolete.

Act now! . . . get all the important money saving, sales promoting facts on SUCRO FLAVOR. Send the coupon below for trial order at reduced price or FREE SAMPLE.

4 WEEK TEST ON 4 LOTS OF 3-WEEK-OLD PIGS					
	Average Starting Weight	Total Gain	Average Daily Feed Intake	Feed Per Pound of Gain	Average Daily Gains
Basal Ration	17.8	23.7	1.30	1.53	.85
Basal Ration Containing 20% Sugar	18.6	27.5	1.72	1.75	.98
Basal Ration Containing 1/20% SUCRO FLAVOR	17.3	27.1	1.45	1.49	.97
Basal Ration Containing 1/10% SUCRO FLAVOR	17.9	31.1	1.67	1.50	1.11

Conclusions from feeding experiment report by Laboratory of Vitamin Technology are as follows:

"Under the conditions of this experiment, 3-week old pigs fed basal ration with sugar or Sucro-Flavor and raised on concrete showed better weight gains than those fed basal ration alone. Feed efficiency on Sucro Flavor was equal to that on basal alone, and better than that on sugar. Therefore, in one ton of pig starter ration, one or two pounds of Sucro-Flavor was found to be equivalent to or better than 400 pounds of cane sugar with respect to weight gain and feed efficiency."

SUCRO FLAVOR

Product of

FLAVOR CORPORATION OF AMERICA

3037 NORTH CLARK STREET, CHICAGO 14, ILLINOIS

FLAVOR CORPORATION of AMERICA
3037 North Clark Street, Chicago 14, Illinois

☐ Send 10 Lb. Trial Order of SUCRO FLAVOR at 100 Lb. Prices. (Also mail special introductory Free 2-Cup Coffee-Saver.)

☐ Rush FREE sample of SUCRO FLAVOR with new brochure, prices, and complete information.

Name.....

Company Name.....

Address.....

City.....*State*.....

Plans Announced For Mill School, Washington Meet

SEATTLE — Plans have been announced for the fifth annual Pacific Northwest Feed Mill Production School and the 32nd annual Washington State Feed Assn. convention.

The two events will take place during the three-day period of Feb. 11-13 at the Hotel Leopold in Bellingham, Wash.

The production school, sponsored by the Washington feed group, will be held Wednesday afternoon, Feb. 11, and all day Feb. 12. A garden supply dealers' program is set for the afternoon of Feb. 12. And the general convention program will be presented on Friday, Feb. 13.

Both the convention program and the production school will feature a number of topics of special current interest—such as integration, hay pelleting and bulk handling.

Production School: The production school will include these features, according to an announcement from John G. Wilson, association manager:

1. Bulk handling forum, with a panel discussion of (a) raw materials and finished feed handling and (b) delivery costs and methods of transporting to and handling at the farm.
2. Custom milling forum, with a panel discussion of (a) problems facing small mills and (b) flexibility in operations.
3. A discussion of continuous vs. batch mixing.
4. Information on evaluating equipment additions.
5. A report on hay pelleting.
6. A presentation on "Hayfers," or hay wafers.
7. A movie showing new equipment for filling bags.
8. Fire prevention—a live demonstration with a model mill.
9. A movie on safety.

Convention Program: One of the principal talks will be "The Impact of Integration," by Oakley Ray, director of market research for the American Feed Manufacturers Assn., Chicago.

Joseph Burger of Los Angeles, a veteran in sales and sales promotion work, will tell "How to Get Better."

Other features also are planned.

Southern Officials Have New Secretary

RICHMOND, VA. — Maurice B. Rowe of the Virginia Department of Agriculture, Richmond, is the new secretary-treasurer of the Association of Southern Feed and Fertilizer Control Officials.

Mr. Rowe was named secretary to succeed Bruce Poundstone of Lexington, Ky., who resigned from the position after being elected secretary of the Association of American Feed Control Officials.

Grant Vansant Retires From E. M. Peet Firm

COUNCIL BLUFFS, IOWA — The E. M. Peet Manufacturing Co., Council Bluffs, has announced the retirement of Grant Vansant, manager of the company's Frankfort, Ind., branch. He will be replaced by Charles E. Galpin, sales manager at the company's Frankfort branch.

Mr. Vansant joined the Peet organization as a salesman in 1920 at Shennandoah, Iowa. In 1923 he was transferred to Indianapolis as sales manager. As business increased, manufacturing facilities were installed and Mr. Vansant became manager of the branch. Then in 1954, the Ater Elevator in Frankfort was acquired and rebuilt to manufacture Peet's line of feed supplements and minerals.

MID-SOUTH

(Continued from page 1)

bert Kiersky, general manager of South Memphis Stockyards and chairman of the livestock committee of the Memphis Chamber of Commerce.

Attending the session at the Hotel Peabody were 40 packers, vocational agriculture and extension personnel, bankers, feed mill operators and farmers from the three states.

Ed Synar, Wilson & Co., Memphis, said that Memphis packers alone import more than 51% of their supply from outside the Memphis market area. During the fiscal year ended Oct. 31, Memphis packers purchased up to $12 million worth of hogs outside the Mid-South.

"Had Mid-South farmers supplied the needs of Memphis packers, they could have pocketed $28 million," Mr. Synar said. "Mid-South packers outside Memphis spent an estimated $25 million for their supply."

Potential Market

To illustrate the potential market of meat-type hog production in this region, Mr. Synar said 385,000 hogs were slaughtered at Memphis in the year ending Oct. 31 in packing houses that would have slaughtered 500,000 head. Memphis and Mid-South packers could handle more than a million head a year, he pointed out.

"We are interested in more jobs and more income for people in the Memphis area, whether in plants or on farms, realizing the potential of meat-type hog production in this area is an important means of creating more income for our people," Mayor Orgill told the delegation.

G. D. Strauss, president of the South Memphis Stockyards Co., described the Mid-South as "nature's gift to livestock" and an area which can produce pork and beef as cheap, or cheaper, as any in the nation.

Several of the visitors cautioned that farmers should be encouraged to go into hog production only on a scientific, planned basis.

William Tyrrell, Tennessee extension specialist in animal husbandry, said, "We need to provide know-how and educate our farmers in proper production procedure."

Serving on the committee, which will meet in Memphis next month, are W. L. Richmond and A. P. Fatheree, representing Mississippi; Robert Hallmark and George Sullens, Arkansas, and Tom Langford and Horace Colvett, western Tennessee. Mr. Synar was appointed co-chairman, along with Mr. Kiersky.

Central Soya Reports Sales, Profit Increase

FT. WAYNE, IND.—Central Soya Co., Inc., Ft. Wayne, reported net sales of $65,428,983, and profits, after provision for federal and state taxes on income, of $1,526,939 for the three-month period ending Nov. 30, 1958. This is compared to sales of $52,395,676, and net profits of $943,504 for the same period last year.

Net profits, after tax provisions, amounted to $1.15 per share for 1,333,275 shares outstanding. For the comparable quarter last year, net profits were $.85 per share for 1,110,481 shares outstanding.

Cooperative to Build Elevator, Feed Mill

NEWKIRK, OKLA.—Stockholders of the Newkirk Farmers Cooperative Elevator & Supply Co. have approved construction plans for a new feed mill in Newkirk and a new elevator near Peckham, Okla.

Cost of the two projects will total $408,000. The elevator will have a capacity of about 500,000 bu., and will cost about $308,000. The feed mill will be a $100,000 installation.

Panel Discussion, Cross Examination to Mark Southeastern Meeting

ATLANTA, GA. — A commercial egg panel discussion and cross examination will highlight the 12th annual convention of the Southeastern Poultry & Egg Assn. here Jan. 26-28, it was announced.

Mays Montgomery, of Tilmont Egg Co. at Athens, Ala., will moderate the discussion, entitled "Dollars and Sense in Egg Marketing," as the lead-off feature of the Jan. 27 afternoon egg program.

Members of the marketing panel include Ed Fain, managing director of the Georgia Chain Store Council; Frank Alcott, manager of egg grading plants for the Kroger Co., Cincinnati; Dr. Norris T. Pritchard, head of the market organization and cost branch of the U.S. Department of Agriculture's poultry division in Washington, and Steve Wilson, regional produce and dairy buyer for Colonial Stores in Atlanta.

The opposing panel of egg industry leaders will include Dr. R. J. Krueger, poultry specialist for Lindsey-Robinson & Co., Roanoke, Va., and Norman Sanders, manager of Farmers Cooperative Exchange, Columbia, S.C. After the marketing team members have made their presentation, they will hear questions from the industry team. The idea behind this "press interview" type panel will be to turn up new opportunities for marketing the growing volume of eggs produced in the Southeast.

Another addition to the egg program is Dr. Robert C. Baker, of the poultry department at Cornell University. He will discuss "The Miracle of the Egg."

His subject will cover the nutrient value of eggs, industrial applications of eggs and egg products and presentation of evidence debunking misinformation on cholesterol in eggs with regard to heart disease.

Other egg program speakers previously confirmed are Dr. W. J. Stadelman, professor of poultry science at Purdue University, on "Cleaning and Shell Treatment of Eggs," and Courtney P. Allen, Hy-Line Poultry Farms Research Laboratories at Dallas Center, Iowa, on "A Dynamic New Science—Blood Typing."

Some relief was offered late seekers of hotel accommodations in Atlanta's downtown area this year by recent construction of new facilities. All requests for housing accommodations should be directed to the Atlanta Convention Bureau, Rhodes-Hoverty Building, Atlanta 3, for quick handling.

K. C. Feed Club Party Draws Largest Crowd

KANSAS CITY—A sellout crowd of 300 attended the Christmas dinner-dance of the Kansas City Feed Club Dec. 20 at the Town House Hotel. The attendance was the largest for any club party, according to L. E. Cox, Bemis Bro. Bag Co., club president.

Ladies attending were each given a travel-alarm clock. Twenty one door prizes, including electric appliances of all types and a transistor portable radio, were given away following the steak dinner. Dancing rounded out the evening of entertainment that started with a cocktail hour.

Mr. Cox paid special tribute to the committee that made the event such a success. That committee, headed by Barney C. McCoy, Ralston Purina Co., also included Don H. Shay, Goffe-Carkener, Inc.; G. R. Coughenour, Rodney Milling Co.; Carl W. Berry, L. R. Jewell & Son; Morton I. Sosland, the Southwestern Miller, and Lyman D. Ketchum, Staley Milling Co.

The club will elect new officers at the next meeting, Jan. 20, in Wolferman's Empire Room on the Plaza.

Kansas May Get New Feed Law

JEFFERSON CITY, MO. — John Sam Williamson, Missouri commissioner of agriculture, has announced that a bill will be introduced in the 1959 legislature to establish a new feed law for the state.

The measure, if passed, would establish a commercial feed law along the lines of the Uniform Feed Law which has been adopted in numerous other states. All formula feed would be registered, with the exception of custom mixes. Proper labeling as to contents, inspection, sampling and analysis, prohibitions against adulteration and misbranding and penalties for violations would be provided for.

Mr. Williamson also announced that he will press for an up-to-date weights and measures law containing provisions covering the sales of pre-packaged merchandise and where the purchaser does not see the contents of the package weighed.

Chicks for Broiler Hatchery Supply Show 11% November Boost

WASHINGTON — Placement of pullet chicks for broiler hatchery flocks during the month of November continued to run ahead of the same month a year earlier, the U.S. Department of Agriculture reports.

Indicated placement by leading primary breeders of replacement stock totaled 2,141,000 chicks during the month, an increase of 11% over the same month in 1957. Sales of replacement pullets by these breeders account for a very large percentage of total supply of replacement pullets for broiler hatchery supply flocks and provide an indication of the potential number of pullets available for addition to hatchery egg supply flocks several months before the pullets will actually move into the flocks.

For the first 11 months of 1958, the total was 30,812,000, a big 30% increase over the same period of 1957.

Pullet Chicks*—Placements for Broiler Hatchery Supply Flocks (Reported by Leading Breeders)

Month	1957	1958	1958 as % of 1957
	—1,000 chicks—		%
January	1,886	1,982	105
February	1,997	2,270	114
March	2,538	3,118	123
April	3,033	3,320	109
May	2,899	3,623	125
June	2,060	3,390	165
July	1,676	3,054	182
August	1,410	2,646	188
September	1,935	2,700	140
October	2,297	2,568	112
November	1,926	2,141	111
December	2,238	....	...
Annual total	25,895	....	...

*Includes expected pullet replacements from eggs sold during the preceding month at the rate of 125 pullet chicks per case of eggs.

Walnut Grove Reports 41% Tonnage Increase

ATLANTIC, IOWA—Walnut Grove Products Co., feed manufacturing firm at Atlantic, had total sales in excess of 100,000 tons for the year ending Nov. 30, an increase of 41% over the previous year, as reported by E. A. Kelloway, president.

Extensive research and development of a more qualified sales and service organization were credited with the increase by Mr. Kelloway.

Walnut Grove is now building a new plant at Cherokee, Iowa, scheduled to open in March. Other plants are located in West Liberty and Independence, Iowa, and in Elkhorn, Neb.

MANEY BROS. MILL & ELEV. CO.
Minneapolis, Minnesota
Distributors in the Upper Midwest States for
SMALL'S DEHYDRATED ALFALFA MEAL

A warm and friendly wish of cheer
For each day of the coming year.

ARCHER-DANIELS-MIDLAND COMPANY

ALFALFA DIVISION

P.O. BOX 356 KANSAS CITY 41, MO.

Rhode Island Feed Men Hear Reports On Research, Feed Law, '59 Outlook

KINGSTON, R.I.—Reports of research at the Rhode Island Agricultural Experiment Station, a forecast of the 1959 agricultural outlook and comments on the Rhode Island feed law blended into a busy program on the University of Rhode Island campus recently. About 50 feed manufacturers, servicemen and others connected with the feed industry were on hand during the afternoon and evening sessions.

Albert L. Owens, agricultural economist at the university, reported that feed is priced 5 to 10% above last year in spite of a record crop and storage supplies. He cited four reasons: Government price supports are only slightly lower; many farmers are holding grain until a new tax year; 1958 crop quality is making more grain eligible for government support, and favorable livestock-feed ratios are leading feed growers to expand livestock holdings.

Prospects are that more supplies will move off farms in January, he said. Prices are not expected to drop significantly until the new crop movement after mid-year.

Mr. Owens said that relatively favorable egg prices in 1958 have caused a slight increase in laying hens. With large numbers of pullets in laying flocks, rate of lay is expected to increase. He said these prospects point to materially lower egg prices during spring and early summer. Somewhat lower prices can be expected during late summer and early fall.

Chicks in commercial broiler areas are up about 15% over last year. With average mortality, broiler output will exceed this indicated expansion during the first quarter of 1959, he said. Prices can be expected to remain close to the recent 15¢ level.

Arthur L. Domike, also of the agricultural economics department, said that producers' milk price outlook in the area for next year is still cloudy because of uncertainty about the effect of the new federal milk order. Spring prices will be at least 50¢ below the favorable ones of a year ago, he said.

John B. Smith, agricultural chemist, said the Rhode Island feed law enacted in 1936 is out of date when compared with the laws of other states and the model feed law proposed by the Association of American Feed Control Officials. A new law based on the model will soon be introduced in Massachusetts. Rhode Island could logically follow that lead, he said.

Richard I. Millar, URI poultry graduate student, pointed out that animal fat could be added to poultry feed up to 18% levels without affecting egg production if proper attention is given to vitamin and amino acid supplementation. In general, all added fat levels up to 30% resulted in poorer nutrient utilization, higher mortality and excessive body weight gains in a Rhode Island study.

Dr. William E. Donaldson, university poultry nutritionist, reported on recent and current poultry research at University of Rhode Island. He covered restricted feeding of laying hens, use of fat and antibiotics in broiler rations, flavor compounds in broiler feeds and the value of good range for replacement birds. Among recent advances in broiler nutrition reviewed were calorie-protein ratios and energy nutrition and enzyme treatment of grains in broiler rations.

Nitrofurans for Calves

B. W. Henderson, Jr., animal and dairy husbandman, reported that a study at the Rhode Island station had found nitrofurans to be one of the more satisfactory treatments for calf scours or calfhood pneumonia. It is being used routinely in the university herd without loss to the disease, he said.

Current research includes nutritive evaluation of alfalfa hay and red clover as influenced by cutting date. A pilot study is being conducted on growing and fattening swine by adding a tranquilizer to the ration. To date no advantage has been evidenced from the practice, it was reported.

Douglas Dodds, extension dairyman, reported that a Cornell University study on feeding levels from birth to calving found: Considerable difference in body weight at calving time; level of feed intake has marked effect on age at which heifers become sexually mature, and level of feed intake when young has no effect on milk yield during any lactation. Studies are being continued to note possible effects of early nutrition on longevity and lifetime production.

Dr. James Cobble, animal and dairy husbandry department chairman, reported that a three-year study at Rhode Island indicates that cows will produce as much milk on soilage (zero pasture) as on rotational grazing. Approximately 1,100 lb. more milk per acre was produced on a soilage program. Economics of soilage feeding depend upon such factors as: Size of herd, land acreage, labor and available equipment, he said.

Preliminary results indicate feeding good silage in the summer compares to a soilage feeding program. Production per acre appears to be greater feeding silage than soilage, he said. Dr. Cobble also mentioned that pelleted forages are increasing in livestock feeding. Their limited use in dairy feeding will increase in the future.

The evening session on animal health was provided by Dr. V. J. Yates and Dr. P. W. Chang, of the URI animal pathology department. Increased absorbtion of antibiotics such as Aureomycin and Terramycin has been obtained in the avian alimentary canal. It has been done by feeding terephthalic acid or reducing calcium feed level. The antibiotic value is increased from three to five times. (Terephthalic acid has not been cleared for use by FDA.)

Dr. Chang reported that most of our commonly used feed additives are compatible and some show additive effect.

E. F. Dickey

PRESIDENT—E. F. Dickey has been elected president of Honeggers' & Co., Inc., Fairbury, Ill. (Feedstuffs, Dec. 20). The announcement came from Sam R. Honegger, chairman of the board of directors. Mr. Dickey joined Honeggers' in 1949 as general sales manager. He was elected to the board of directors early in 1951 and made a vice president later the same year. In 1953 he was appointed general manager, and he was elected executive vice president in 1955.

F. H. Peavey & Co. Announces Three Personnel Changes

MINNEAPOLIS — Election of Charles E. Huntting to the post of executive vice president, and a new alignment of top-level merchandising responsibilities have been announced by F. Peavey Heffelfinger, president, F. H. Peavey & Co., Minneapolis.

Fredric H. Corrigan was elected vice president in charge of terminal merchandising for the grain and milling firm. Frederick B. Wells, III, becomes vice president of Peavey Elevators country division, and will be in charge of grain merchandising there.

Mr. Huntting formerly was vice president in charge of terminal merchandising. He joined Peavey in 1947 as assistant to the president, was elected vice president in 1948, vice president and assistant in charge of terminal merchandising in 1951 and was elected a member of the board of directors and vice president in charge of terminal merchandising in 1955. He was assistant chief commissioner, Canadian Wheat Board, from 1943 to 1947.

Mr. Corrigan started in the inspection department of Van Dusen Harrington division in 1936, and became a floor trader and merchandiser in 1939. He was later assigned to a merchandising position with Globe Elevators division, Duluth, Minn. He was appointed assistant general manager of Globe Elevators in 1950, and in 1951 was elected vice president and general manager of the division. In 1955 he was elected vice president and assistant in charge of terminal merchandising, the position he held until his recent promotion. He also is president and a director of the Omaha (Neb.) Elevator Co.

Mr. Wells, following temporary assignments with Peavey Feed Mills as a trucker and Van Dusen Harrington as a grain inspector, joined Peavey in 1950 as a trainee at one of the company's terminal elevators. He was named a floor trader and merchandiser in February, 1951. In 1953 he was elected an assistant secretary and a member of the board of directors of Peavey. He joined the wheat department of King Midas Flour Mills as grain buyer and a floor trader in 1954.

U.S. Blackstrap Output Shows Slight Increase

NEW ORLEANS — Indicated 1958 production of blackstrap molasses from sugar cane is 46 million gallons for Louisiana and Florida combined, the U.S. Department of Agriculture office here reports. This is about 1 million gallons more than estimated production for last year.

The report said Louisiana sugar mills have ground 4,901,174 tons of sugar cane as of Dec. 13. Total production of sugar cane for sugar and seed for the entire 1958 season is estimated at 5,267,000 tons for Louisiana and 1,274,000 tons for Florida, making a U.S. total production in 1957 of 6,334,000 tons.

Markets for feeding cane molasses were reported to be very firm for the week ended Dec. 23. Demand continued an improvement noted a week earlier, resulting partly from heavier winter feed requirements. Prices at New Orleans were mostly 13¢, a ½¢ increase over the previous week.

New Plant

SPRINGFIELD, MO.—A new bulk batching plant to supplement present feed facilities of Tindle Milling Co., Inc., here went into production this week. The new plant was built adjacent to the present mill.

Drouth Pinches California Farmers

SACRAMENTO, CAL. — The pinch of California's worst drouth in 50 years is keenly felt in northern cattle raising and grain growing sections.

Stockmen, with range feed exhausted, are hardest hit. Supplemental feeding is the order of the day with non-irrigated pastures and range land virtually bare of natural feed. Hay is bringing premium prices in some areas.

Lack of green forage has resulted in some symptoms of vitamin A deficiency in livestock, lowering resistance to pneumonia and other ills. Some cattlemen have been forced to haul water for their stock.

Many cattlemen predict that even when the rains come, mid-winter temperatures will slow forage growth until spring, perhaps even as late as March.

Growers of winter grain also are scanning the skies anxiously. Most took advantage of the dry weather for thorough preparation of seed beds but are unwilling to plant until the soil is thoroughly moist.

Fields which were planted to barley and wheat earlier in the fall will have to be reworked and replanted when the ground is moistened. Maximum yields in California usually come from plantings before Dec. 15, and if farmers are not able to seed until January, crop reductions of up to 15% may result.

Albert Merck Named Merck & Co. Executive

RAHWAY, N. J.—Albert W. Merck has been appointed assistant to the executive vice president of Merck & Co., Inc., Henry W. Gadsden, who announced Mr. Merck's appointment.

Mr. Merck's responsibilities will be principally in the area of company marketing problems. Prior to this appointment he had been director of advertising and promotion of the Merck chemical division since December, 1955.

Mr. Merck has had a background of experience in the company's commercial actvities since 1947. He served as chemical purchasing agent, assistant to the manager of branches, manager of the chemical division's East Coast branch, and in several other marketing and merchandising capacities. He is a member of the Association of National Advertisers.

Mr. Merck is a graduate of Harvard University. He is a son of the late George W. Merck, formerly chairman of the board of Merck & Co., Inc.

Cash Demand Boosts Oilseed Meal Futures

MEMPHIS — Oilseed meal futures mostly were higher on the Memphis Board of Trade the past week, compared with the week before. Continued good demand for the cash article kept the futures market firm. A number of new seasonal highs were posted.

As the Chicago Board of Trade's December soybean oil meal contract expired, there was a flurry of short covering here. December closed Dec. 22 in Memphis.

Despite rather unfavorable feeding ratios, mixed feed business was reported good, and this gave a lift to the cash and futures oilseed meal futures markets.

Unrestricted soybean oil meal closed Dec. 22 $1 to $4.25 ton higher than on Dec. 15, Eastern Trunk Line soybean oil meal 50¢ to $2.50 higher, bulk solvent cottonseed oil meal 75¢ lower to $2.75 higher, sacked old process cottonseed oil meal $1 to $2.50 higher.

Harry A. Bullis

Gerald S. Kennedy

Harry Bullis Retires; General Mills Elects Chairman and V. P.'s

MINNEAPOLIS—Harry A. Bullis will retire Jan. 1 as chairman of the board of directors of General Mills, Inc., a post he has held since 1948. The company's board of directors has elected Gerald S. Kennedy, currently executive vice president, to succeed Mr. Bullis.

Also announced this week was the election of three executive vice presidents—Edward O. Boyer, A. D. Hyde and A. Z. Kouri. All three have been vice presidents and administrators.

Mr. Kennedy, who joined the parent Washburn Crosby Co. in 1914 as an office boy, became director of flour and feed operations of General Mills in 1942, a vice president in 1943, a director in 1948 and administrator of flour, feed and oilseeds activities in 1953. He was named executive vice president of the company in September, 1958.

Mr. Boyer is a member of the board of directors and executive vice president in charge of the feed, flour and oilseeds division of the company. He joined the Sperry Flour Co. at Oakland, Cal., in 1911. He advanced to general sales manager, general manager of the Sperry division and vice president of General Mills, Inc. In September, 1958, he became administrator of basic commodities activities.

Mr. Hyde will be executive vice president in charge of mechanical and chemical activities. He joined General Mills in 1928, a year after leaving college. In 1942 he became vice president and director of research, and in 1953 was named administrator of mechanical and chemical activities. He serves as vice president in charge of research, and is a member of the board of directors.

Mr. Kouri will be executive vice president in charge of consumer food activities.

The General Mills directors have asked Mr. Bullis to continue as a member of the board and of the executive committee. He joined the board of directors in 1930, and has been a member of the executive committee since 1931.

Referring to his "retirement" plans, Mr. Bullis spoke enthusiastically of his being appointed by President Eisenhower as chairman of the International Development Advisory Board. The board, Mr. Bullis explained, has the duty of advising the President, and other officers whom he may designate, on general and basic policy matters relating to technical cooperation, the Development Loan Fund, and the encouragement of private enterprise under the Mutual Security Program. He will also continue his activities in a number of other civic and business organizations.

Edward O. Boyer

MILLFEED • FEED GRAIN
FEED INGREDIENTS
What Do You Need?
—Jerry Parks
633 Board of Trade
KANSAS CITY, MISSOURI

Grain, Feed Dealers National Schedules Regional Meetings

WASHINGTON — Six regional director meetings have been scheduled by the Grain & Feed Dealers National Assn., according to an announcement by Madison Clement, president of the association and president of the Clement Grain Co., Waco, Texas.

The meeting schedule is as follows: Jan. 24, Kansas City; Jan. 26, Monterey, Cal.; Jan. 28, Portland, Ore.; Jan. 30, Minneapolis; Jan. 31, Chicago, and Feb. 2, Washington, D.C.

In the announcement sent to presidents and secretaries of associations affiliated with the national association, Mr. Clement said that officers and directors of the national association have long felt a need for a better exchange of ideas between state feed and grain associations and the national group.

"Many of the problems of one area affect trade policy on a nation-wide scale or with other areas. The national directors at the time of our annual meeting authorized regional director meetings to give us all a better understanding of current trade problems," Mr. Clement explained.

Attending all of the meetings will be Mr. Clement, Alvin E. Oliver, Washington, D. C., executive vice president of the national association, and E. B. Evans, chairman of the national executive committee. Other national officers will attend at least one of the sessions.

Mr. Clement explained that at each meeting plans are for a short business meeting of national directors (including both those elected and those appointed by the affiliated associations) at 10:30 a.m. At 12:15 presidents and secretaries of associations affiliated with the national association are invited to attend a luncheon at each meeting as guests of the national association's officers.

GFDNA Plans Role For Future Years

WASHINGTON—Long-range plans for the Grain & Feed Dealers National Assn. were made by the executive committee and officers of the association at a recent meeting in Chicago.

The conference, entitled "Operation Horizons," devoted 2½ days to appraisal of past growth, present status and future development of the association. Specific recommendations to be submitted to directors for consideration include a completely new dues schedule and membership classification, projects and programs considered necessary for the years ahead and the role of committees and staff.

Also set at the conference were the dates for six regional director meetings.

FEED CONTROL COMMENT

★

A new department, "Feed Control Comment," will be found on page 82 of this issue of Feedstuffs. The author is Bruce Poundstone, Kentucky control official and secretary of the Association of American Feed Control Officials. Mr. Poundstone previously was secretary of the Association of Southern Feed and Fertilizer Control Officials. Mr. Poundstone will discuss various aspects of feed control which are of importance and interest to feed men.

Resolution Adopted for California Egg Council

LOS ANGELES — The California Poultry & Hatchery Federation has adopted a resolution to sponsor the organization of a local egg council, according to a bulletin from the Pacific Dairy & Poultry Assn., Los Angeles.

The bylaws for the organization were proposed by Don Turnbull, American Poultry & Hatchery Federation, Kansas City. Willard Smith, secretary of the California federation, is arranging a series of meetings through the state for the purpose of determining industry interest and support for such an organization, it was said in the bulletin.

A. H. Baxter Dies

BUFFALO, N.Y.—Allan H. Baxter, 72, head of the A. E. Baxter Engineering Co., which specializes in the design of grain processing plants, died recently in his office. He was an outstanding layman of the Episcopal Diocese of Western New York.

INDUSTRY DEMANDED IT--
B&L DELIVERED IT
STANDARD EQUIPMENT ON THE
B&L FORMULA FEED BLENDER
THE FIRST PRACTICAL BALED HAY GRINDER
GRINDS ROUND & SQUARE BALES
WITH EQUAL EASE
FARM FRESH
FORMULA
● GRINDS WHOLE BALES WITH NO EFFORT
● LARGE FEED TABLE—30" ABOVE GROUND
● POWER DRIVEN GATHERING FINGERS
● VARI-SPEED FEED DRIVE
● COMPLETELY ENCLOSED WHEN NOT IN USE
● NO EXTRA POWER NEEDED
● UTILIZES FULLEST EQUIPMENT EFFICIENCY
GET THE COMPLETE STORY
Ask For FREE Catalog PFB-158
B&L
BARNARD & LEAS
Manufacturing Company INC.
1200-34 Twelfth St., S.W.
Cedar Rapids, Iowa

PIG CROP

(Continued from page 1)

94.8 million head, the report said. This is 8% larger than the 1957 crop of 88 million head.

Fall Crop: The 1958 fall crop was the third largest of record, being exceeded only in 1942 and 1943. Fall pig numbers were above last year in all regions of the country, with the heavy producing north central region showing the largest increase of 24%.

Sows farrowing in the fall of 1958 were estimated at 5,926,000 head, 16% more than in the fall of 1957. The percentage increase in 1958 fall farrowings from 1957 was 3% more than indicated by farmers' intention reports last June 1.

A record 7.17 pigs were saved per fall litter. The increase in litter size was general, with all regions showing an increase except for the west north central region which was unchanged.

1958 Spring Crop: The 1958 spring pig crop is estimated at 52,336,000 pigs, 1% above 1957. Sows farrowed in the 1958 spring season totaled 7,428,000, 2% more than a year earlier.

1958 Total Crop: The combined spring and fall crops are estimated at 94,806,000 head in 1958, about 7 million head more than the previous year. This is 6% more than both the 10-year average and the year 1956, but it is 1% less than the 1955 crop.

Spring Intentions: A total of 8,317,000 sows farrowing for the 1959 spring crop would be an increase of 12% over last spring, but only slightly more than the average farrowing for the spring crop. Compared with 1958, all sections of the country show increases. The north Atlantic shows an increase of 5%; east north central, 8%; west north central, 12%; south Atlantic, 11%; south central, 21%; West, 21%.

Corn Belt States: A look at the intended number of sows for 1959 spring farrow for nine of the Corn Belt states shows 10% more than a year earlier. These states—Ohio, Indiana, Illinois, Wisconsin, Minnesota, Iowa, South Dakota, Nebraska and Kansas—accounted for 67% of the 1958 total U.S. pig crop.

Present intentions in these states indicate that increases will take place in both the winter (December through February) and the spring (March through May) quarters. Sows expected to farrow during December, January and February at 1,921,000 head are 16% more than the 1,651,000 head for the same period a year earlier. The present survey indicates a smaller increase for this period than the earlier intentions reported in September.

The 3,650,000 head intended for farrowing in March, April and May of 1959 for these nine states are 8% more than the number farrowing during the same period of 1958.

Swine on Farms: The number of all hogs and pigs on farms in these nine states Dec. 1 totaled 41,891,000 head, 13% more than the 37,212,000 a year earlier. Each of the nine states shows more hogs Dec. 1 than a year earlier. The increases range from 4% in Ohio to 24% in Kansas.

Hogs and pigs six months old and over totaled 15,486,000 head, 3% more than a year earlier. The number under six months was 19% more than last December, with an increase of 22% in the 3 to 6 months age group and an increase of 16% in the number of pigs under three months of age. The 12,574,000 pigs under three months of age on farms Dec. 1 accounted for 30% of all hogs, compared with 10,806,000 head a year earlier, or 29% of the total hogs.

Pigs 3 to 6 months of age totaled 13,831,000 head, 33% of all hogs this year, compared with 11,367,000 head, or 31% of the total a year earlier.

Pigs Saved, Fall, 1957 and 1958; and Sows Farrowing, Spring, 1958 and 1959

State and division	Pigs Saved Fall (June through November) 1957	1958	1958 as % of 1957	Sows Farrowing Spring (December through May) 1958	1959*	1959 as % of 1958†
	1,000 head		%	1,000 head		%
Maine	13	14	108	2	2	110
New Hampshire	7	9	129	1	1	108
Vermont	7	8	114	1	1	100
Massachusetts	77	78	101	13	13	100
Rhode Island	7	6	86	1	1	111
Connecticut	13	14	108	2	2	100
New York	98	100	102	15	17	113
New Jersey	82	81	99	17	16	93
Pennsylvania	365	380	104	57	61	107
North Atlantic	669	690	103	109	114	105
Ohio	2,138	2,310	108	341	368	108
Indiana	3,421	3,800	111	537	580	108
Illinois	4,869	5,646	116	902	992	110
Michigan	550	665	121	90	101	112
Wisconsin	1,366	1,672	122	301	313	104
E. N. Central	12,344	14,093	114	2,171	2,354	108
Minnesota	2,101	2,729	130	553	630	114
Iowa	7,081	8,499	120	1,629	1,808	111
Missouri	2,892	3,437	119	506	577	114
North Dakota	117	176	150	87	96	110
South Dakota	511	773	151	292	330	113
Nebraska	1,181	1,505	127	360	400	111
Kansas	583	764	131	129	150	116
W. N. Central	14,466	17,883	124	3,556	3,991	112
North Central	26,810	31,976	119	5,727	6,345	111
Delaware	27	26	96	4	5	112
Maryland	146	144	99	23	25	108
Virginia	504	533	106	79	80	101
West Virginia	76	86	113	11	13	118
North Carolina	904	972	108	185	215	116
South Carolina	346	384	111	69	79	114
Georgia	1,148	1,267	110	229	250	109
Florida	249	325	131	60	66	110
South Atlantic	3,400	3,737	110	660	733	111
Kentucky	944	994	105	153	168	110
Tennessee	833	937	112	151	180	119
Alabama	733	794	108	128	136	106
Mississippi	409	474	116	79	95	120
Arkansas	290	317	109	40	50	125
Louisiana	240	247	103	40	50	125
Oklahoma	295	428	145	53	75	142
Texas	680	889	131	125	175	140
South Central	4,424	5,080	115	769	929	121
Montana	78	106	136	18	26	144
Idaho	71	88	124	15	18	120
Wyoming	21	29	138	4	5	125
Colorado	104	131	126	22	31	140
New Mexico	23	24	104	5	5	109
Arizona	22	21	95	3	3	103
Utah	62	53	85	9	10	110
Nevada	10	13	130	3	3	100
Washington	96	112	117	15	19	125
Oregon	112	148	132	19	25	130
California	246	262	107	50	51	102
Western	845	987	117	163	196	121
U. S.	36,148	42,470	117	7,428	8,317	112

*Number indicated to farrow from breeding intentions reports.
†Percentages based on unrounded numbers.

STABILITY

(Continued from page 1)

eling or better spacing of production and marketing, and previous market gluts, with eventual price disaster, are less likely.

The USDA expert's analysis is by no means a prediction that the milennium has been attained and stability achieved and profits assured. However, this observer calls attention to a hopeful and encouraging trend which has been exhibiting itself to the experts for some time. The latest USDA pig crop report provides further confirmation of this theory. The report contains some good tidings for the swine and feed industries, making a fine holiday package.

As reported in an accompanying story, the 1959 spring pig crop is expected to be up 13% from 1958. This is a smaller increase than some observers had expected. Corn Belt farmers will have fewer sows farrowing than previous intentions had indicated.

Fall Crop

While the spring pig crop will be up less than expected, the 1958 fall pig crop (June-November) is larger than previously estimated. In commenting on the spring pig crop prospects, the USDA observer also commented on the 17% hike in the 1958 fall pig crop. He pointed out that this is accomplished by the farrowing of sows not greatly in excess of the sow herds in the 10-year period of 1947-56.

The major advance comes from an increase in the number of pigs saved per litter—substantially larger than the number saved in the base period noted above.

This element is confirming testimony that the feed industry and the use of modern feeds and feed additives has been a vital factor in smoothing out the economic road for the swine producer.

These conditions and the likelihood of reasonable price stability for the next 18 months are seen as working to the joint benefit of all concerned.

Cite Statistical Data

Supporting the forecast of price stability through the next 18 months at a not too drastically reduced level, USDA experts refer to some of the statistical data in the December pig crop report.

It has previously been feared that favorable feeding relationships and plentiful supplies of feed would result in a piling up of animals and that peaking periods of slaughter could produce disastrous price declines late in 1959. To the USDA experts the pig crop report illustrates the trends in production patterns which justify some more optimistic conclusions.

It is pointed out that farmers are farrowing a larger share of spring pigs in the December-February period, thus reducing the fall impact of the heavier March-May farrowings.

For the December-February period, the report indicates that pig output increase will be 16% over a year earlier, but the heavier impact on the market comes from March-May farrowings. And for this latter three-month period, only an 8% increase over a year earlier is indicated for the number of sows to farrow.

Thus, a continuing trend toward more evenly spaced swine production and marketing is apparent.

And, in all, relative stability for the swine industry is expected for the next 18 months at least. However, there have been predictions that some real trouble can come in 1959 if there are further sharp increases in swine production.

Sows Farrowing by Quarters (December-February and March-May), Selected Corn Belt States

State	December* through February Average 1947-56	1958	1959†	1959 as % of 1958	March through May Average 1947-56	1958	1959†	1959 as % of 1958
	1,000 head			%	1,000 head			%
Ohio	116	142	155	109	279	199	213	107
Indiana	210	301	307	102	363	236	273	116
Illinois	172	325	390	120	756	577	602	104
Wisconsin	81	96	105	109	270	205	208	101
Minnesota	66	139	190	137	581	414	440	106
Iowa	224	460	540	117	1,693	1,169	1,268	108
South Dakota	16	40	54	135	312	252	276	110
Nebraska	48	95	115	121	416	265	285	108
Kansas	38	53	65	123	118	76	85	112
Total 9 states	942	1,651	1,921	116	4,788	3,393	3,650	108

*December preceding year.
†Number indicated by breeding intentions reports.

Eugene C. Holcombe

JOINS SPECIFIDE—Eugene C. Holcombe has joined Specifide, Inc., Indianapolis, to fill the company's newly created post of director of advertising and sales promotion, it was announced by John O. Beasley, president of the firm. Mr. Holcombe formerly held the same position with the special products division of the Borden Co., New York. In his new post, Mr. Holcombe will be in charge of product advertising for Specifide, and will supervise the development of an advertising service for the firm's customer organization. He will also work with W. L. Brickson, executive vice president, in administering the company's sales training program. Mr. Beasley said Mr. Holcombe's appointment is another step in an expansion program recently launched with the acquisition of additional production and distribution facilities in Des Moines.

Minnesota Dealer School Plans Told

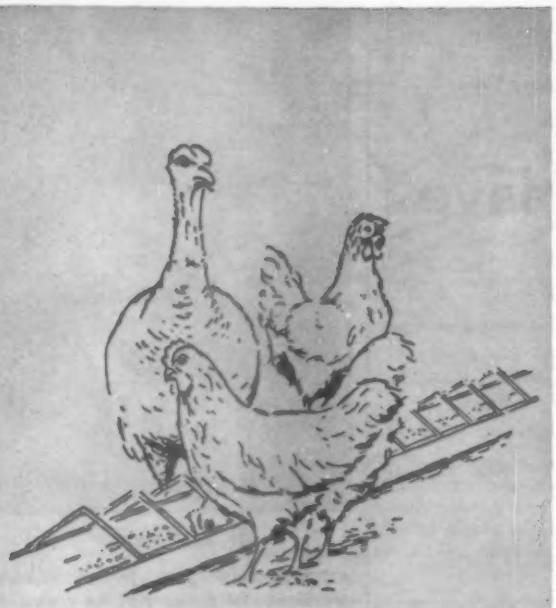
ST. PAUL, MINN.—Plans for the Retail Feed Dealers Training School to be held Jan. 5-9 at the University of Minnesota's Institute of Agriculture, have been announced.

Among the subjects to be covered in the school are: nutrition and management considerations for beef and dairy cattle, swine and poultry; customer relations; public relations; economics in feeding; how to treat employees; what makes a customer repeat; importance of capital; sound credit program; market price; employee training; soil testing; management; service, community responsibilities and others.

The school is arranged with the cooperation of the Northwest Retail Feed Assn. and the university's institute of agriculture.

Instructors will come from industry and the various departments of the Institute of Agriculture.

A limit of 50 applicants will be accepted on a first-come first-served basis.



Dawe's

DaweNzyme©

makes barley better for birds at lower cost than corn diet.

DaweNzyme
PERFORMING COMMERCIALLY

DaweNzyme is long out of the laboratory stage and into commercial usage. Hundreds of carloads of top-performing feeds are being fortified with DaweNzyme, the starch-splitting enzyme system which makes barley the approximate of corn in growth, feed efficiency and palatability.

DaweNzyme extensively tested by state experiment stations and proved commercially, is an economic boon to those where barley is available for less than corn. With DaweNzyme, barley can be the principal grain without the former penalties of lowered growth and feed efficiency, compared to corn.

DaweNzyme is easily incorporated in the feed formula. It is a dry, free-flowing, stable material. No special handling is involved and ordinary mixing procedures are followed.

While attention has been focused on barley, tests show small, but consistent, improvements in the utilization of corn itself, when supplemented with DaweNzyme.

1956 ... Dawe's began research and development on the application of enzymes to nutrition.

1957 ... April ... Washington State College reported starch-digesting enzymes improved nutritional value of barley in poultry feeds.

1957 ... July ... Dawe's publicly announced DaweNzyme as the first commercially available enzyme system for feed application.

Investigate the economic advantages of fortifying your feeds with DaweNzyme today. It is available immediately in any quantity.

World's Oldest and Largest Specialists in Vitamin Products for Feeds

Dawe's

Plants and warehouses strategically located throughout the United States to serve you without delay.

DAWE'S LABORATORIES, INC.
4800 South Richmond Street
Chicago 32, Illinois

© Trademark for Dawe's Laboratories ENZYME.

FOREIGN OFFICES:
BELGIUM—13 Courte rue des Claires, Antwerp ITALY—Corso Magenta 81/83, Milan MEXICO—Sierra Leona 755, Mexico 10, D. F. VENEZUELA—Apartado 3050, Caracas

OUTLOOK

Nutrition—What's Next—Let's Have a Look at Drugs in Feeds

"Drugs have done wonders in reducing mortality from certain specific diseases, but preventive drugs in feeds were never intended to be a substitute for sound sanitation and good management. . . . A broad educational program on preventive drugs is needed. All interested segments of animal agriculture need to be well informed on what drugs can do as well as what they cannot do."

By Dr. J. E. Hunter
Allied Mills, Inc.

In the past few years, what might be considered as extravagant predictions have been made by nutritionists, and even though such opinions at the time they were made may have, by some, been deemed overly optimistic, they have in the main come true.

The science of nutrition—skillfully practiced by hundreds of hard-working and deep-thinking research people in the laboratories of feed manufacturers, allied industries and tax-supported institutions—has paved the way, year after year, for greater performance in the feedlot, and every year producers of meat, milk and eggs see better records in growth, production and feed efficiency.

No attempt will be made in this short article to list the nutritional discoveries of the past or to predict those of the future. It should, however, be realized that the older discoveries are just as important as the recent ones, and that top performance can be attained only by skillfully combining into a bag of feed the good findings both old and new.

"Growth Permitters"

It is certain that the year ahead will see more advances in nutritional technology, and many new records of performance. Records that were very good in 1958 will undoubtedly be surpassed in 1959. It is quite likely that the coming year will bring to light new compounds, and better uses for existing compounds. We will undoubtedly see more new items that might be classed as "growth permitters," which when properly incorporated into feeds will enable animals to grow and produce still faster on less feed. Such "growth permitters" may be found in the categories of trace minerals, vitamins, antibiotics, arsenicals, hormones, drugs and other classes of chemical compounds.

Increased attention will be paid to management and environmental factors, which will help optimum nutrition produce a unit of product with less feed and at lower cost.

A research worker in nutrition today must work with a wide variety of items not necessarily classed as nutritional entities. He must be familiar with a wide variety of drugs, and know how they are going to work in relationship to his feed products. It is hoped that the year 1959 will see a new appraisal of the use of drugs in feed, which will cause feed manufacturers, drug manufacturers and customers interested in drugs in feeds to assess calmly and critically these important items as to their limitations as well as to their values. To date much has been said regarding the virtues of drugs, and too little has been said about their shortcomings.

Not a Substitute

No attempt is being made to depreciate in any way the value of preventive drugs in feeds. These drugs have done wonders in reducing mortality from certain specific diseases, but preventive drugs in feeds were never intended to be a substitute for sound sanitation and good management in the poultry house or in the feedlot. The success of certain drugs has brought about a false sense of security to many people, including feed manufacturers, drug manufacturers and users of feed. It is doubtful if there are today any perfect drugs which can be relied upon at all times to prevent, on a 100% basis, the diseases they are intended to help prevent. Several drugs, while doing a good job of preventing diseases, also have objectionable features that can cause trouble if used for animals other than the ones intended, or even with animals of the same species but of different ages.

Certain drugs have been used so successfully in the past that they have caused some users of the drugs, or of feeds containing the drugs, to discontinue the sound management and sanitation practices necessary to help control diseases. Nature generally fights back against any drug, and there is always a possibility that organisms causing disease may develop a resistance to the drug. Drugs should be considered as an aid in preventing disease, rather than as complete preventers of disease.

This writer firmly believes that the interests of all concerned can be best served if in the future the users of a drug, and of feeds containing the drug, can be acquainted not only with the desirable features of the product but also be well informed of its limitations.

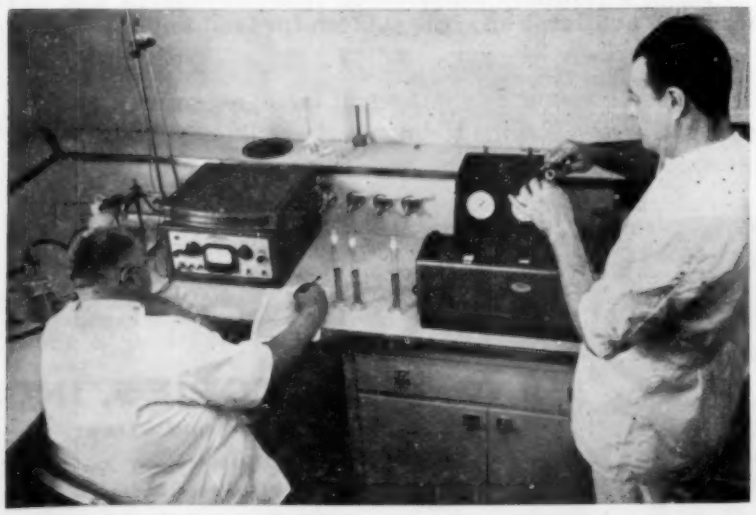
The feed and pharmaceutical industries have conducted much research in recent years on the value of preventive drugs in feeds. The tendency of nature to fight back would seem to indicate that some drugs, no matter how effective they are at the time of their introduction, may be relatively short lived, and that new drugs will have to be developed at rather frequent intervals if the desired objectives are to be attained.

Educational Program Needed

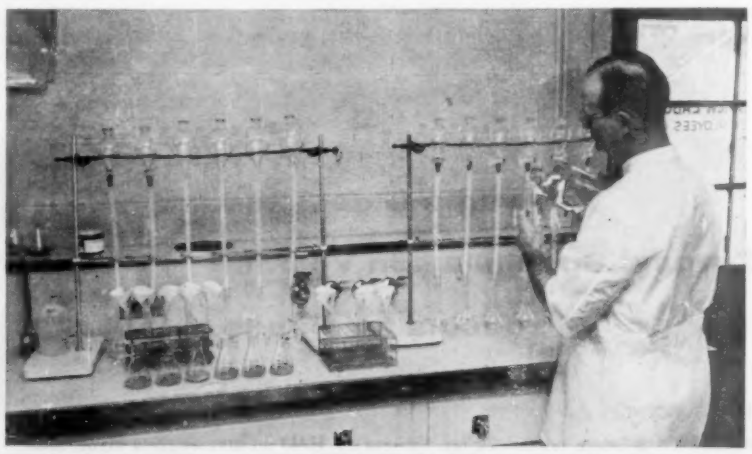
A broad educational program on preventive drugs needs to be instituted. All interested segments of animal agriculture need to be well informed on what drugs can do, as well as what they cannot do. Management and sanitation procedures, which must necessarily work hand in hand with preventive drug programs in feeds in order that desired re-

Dr. J. E. Hunter

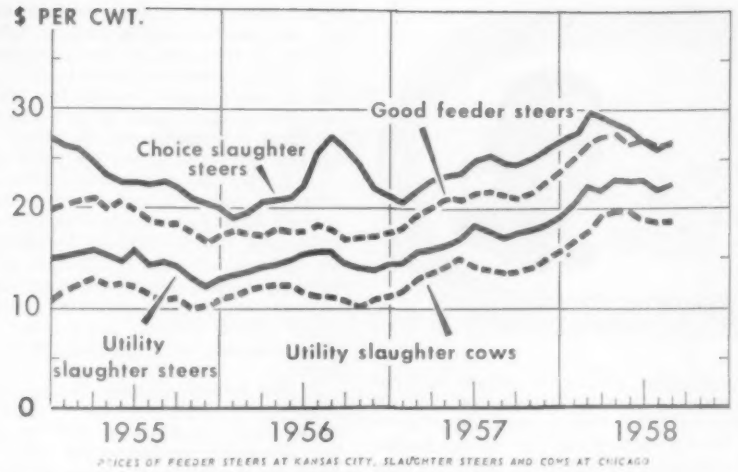
AUTHOR—Dr. J. E. Hunter is vice president and director of the research division of Allied Mills, Inc., manufacturer of Wayne Feeds. He did his undergraduate and graduate work at the University of Missouri, receiving a Ph.D. in agricultural and biological chemistry. Dr. Hunter was on the staff at Pennsylvania State University from 1928 to 1937. While there he did full-time research on nutritional requirements of poultry; among the work for which he is well known were a four-year study of vitamin D requirements of poultry and help in developing the first specialized turkey rations. In 1937, Dr. Hunter joined Allied Mills to help develop a research division; this was started at Peoria and then transferred to Libertyville, Ill., in 1947. He was an organizer, charter member and first chairman of the American Feed Manufacturers Assn. Nutrition Council, and is the sole surviving member of the original group. Dr. Hunter also is active in other industry research groups and is a member of several scientific and honorary societies. He was elected vice president of Allied Mills in 1958. In the accompanying article, Dr. Hunter discusses the role of drugs in feeds and an educational program on the use of medicated feeds. Such a program is being launched by the AFMA and medicament suppliers.



Laboratory workers are assaying for a coccidiosis-preventive drug and for trace minerals. This picture was taken in the laboratories at the Allied Mills research farm at Libertyville, Ill.



A vitamin assay is being run in this photograph taken in the Allied Mills laboratories.



PRICES OF FEEDER STEERS AT KANSAS CITY, SLAUGHTER STEERS AND COWS AT CHICAGO

CATTLE PRICES RISE—All cattle prices have risen in recent months, and those of feeder stock have gone up the most. In late summer, good feeder steers at Kansas City sold for more than choice-fed steers at Chicago. The chart indicates that the margin on feeder-fed steers is small. At present, it appears that cattle and lamb prices stand a good chance of averaging about as high in 1959 as in 1958.

sults may be secured, must be developed and publicized.

Certain people have relied so heavily on drugs in feed that they became greatly confused when conditions arose in which the drug would not operate with the 100% effectiveness that the user thought it should. Many users of drugs in feeds, when they suddenly realized that the complete protection they hoped for was not being obtained, were not able to prevent losses, since they were not acquainted with the additional procedures which might have prevented such loss.

A sound program of education, designed to better inform the people on drug usage and drug limitations, is now being considered by many competent people in the feed and drug industries. It is hoped that this program can get under way within a short time, and that it can accomplish the desired objective. Preventive drugs in feed are undoubtedly here to stay, and will continue to exert a valuable economic effect on animal and poultry production. Their effect can, however, be more beneficial when those concerned with their use are completely informed as to what a preventive drug in feed can be expected to do, and what it cannot do.

Preventive drugs and good nutrition have worked hand in hand to make more profit for the farmer. For continued success, all available information on drug efficacy or lack of efficacy should be placed in his hands.

Protein Blenders, Inc., Tells Expansion Plans

IOWA CITY, IOWA — Protein Blenders, Inc., Iowa City feed manufacturing firm, was authorized Dec. 9 to issue $1,000,000 of 5% convertible bonds to be sold Iowa residents to sponsor general business expansion, it was announced by C. Urban Kelly, chairman of the board. The authorization was by the Iowa Insurance Commission.

Mr. Kelly announced that sales have increased from $1,241,000 to $8,570,000 in the past 10 years, requiring additional facilities. He said the new Maplecrest cold storage plant in Iowa City has proved a success, and subsidiaries, Hills (Iowa) Grain & Feed, and English River Concentrates at Riverside have had good years. The Maplecrest turkey business is developing a new sales area in Colorado, he pointed out.

PROJECT NEARS COMPLETION

MADISON, S.D. — An expansion and remodeling project at Farmers Feed Mill here is nearing completion. Ten elevated metal feed bins are being installed above the new driveway to provide more efficient bulk handling. Also new are a three-ton mixer and an enclosed truck driveway.

Tranquilizer Increases Gain in Range Cattle In Montana Field Trial

LIMA, MONT.—The feeding of a tranquilizer was reported this week to have increased gains in range cattle.

Wayne Montgomery, Jr., Montana rancher, said that adding the tranquilizer—"Tran-Q"—to his range supplement improved daily gains and feed efficiency by nearly 15% and profits by $10 a head.

This was the first range test using the new additive to be commercially conducted.

The field trial was conducted with 1,500 yearling steers in a mountainous range area of southwestern Montana. Cooperating in the 140-day trial were Mr. Montgomery, a milling company and the agricultural research and development center of Chas. Pfizer & Co., Inc., Terre Haute, Ind. Pfizer is the manufacturer of Tran-Q.

Mr. Montgomery said the 867 steers receiving the additive gained ⅛ lb. more per day than the 700 controls. Final weights of the treated animals averaged 850 lb., outgaining the controls by 28 lb.

The fact that final weights of both steer groups exceeded 800 lb. received considerable attention among other cattlemen, said Pfizer researchers who cooperated in the tests. Ordinarily, they said, many Montana ranchers handle a similar range program without supplemental feeding, selling off yearlings at between 600 and 700 lb. It was concluded that the supplemental feeding accounted for the much heavier weights of the steers in both the treated and control groups.

Mr. Montgomery said the 1,500 steers in the trial averaged nearly $59 profit per head over feed costs. The supplement used by both steer groups was a pelleted formula. It included the antibiotic Terramycin.

The steers fed the tranquilizer required ⅛ lb. less feed per pound of gain than the controls, the rancher said.

Study Made of Milk Production Efficiency

BURLINGTON, VT.—A study conducted by agricultural economists at the University of Vermont has shown that Vermont farmers are producing more milk more efficiently, with the cost of each 100 lb. of milk averaging $5.18.

Visiting 188 farms, the university economists broke down the production costs to show such items as cost of feed, average hourly income and similar factors. The $5.18 that it cost to produce the cwt. of milk included $3.08 in feed costs, according to the report.

Yes!

He's looking for some of your dog food made with our complete dog food cereals

★ TOASTED CORN FLAKES ★ KIBBLED CORN
★ TOASTED WHEAT FLAKES ★ KIBBLED WHEAT
★ CORN GRANULES ★ KIBBLED PREMIXES

(Straight or Mixed Shipments)

Carloads — Truckloads — LCL — LTL

LAUHOFF GRAIN COMPANY

PHONE 1800 — *Cereals of Quality Since 1862* — Danville, Illinois — TELETYPE 8261

A. E. BAXTER ENGINEERING CO.

Designers and Engineers for Mills, Elevators and Feed Mills

1311-1315 GENESEE BUILDING BUFFALO 2, NEW YORK

Ray Ewing

VITAMIN A

is Still the MOST STABLE **VITAMIN A** *you can use!*

The Ray Ewing Company, Pasadena, California

Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.

The Effect of Experimental Infection with Ostertagia Ostertagi and Trichostrongylus Axei in Calves on Weight Gain, Feed Consumption and Feed Utilization.

● G. E. Cauthen and J. F. Landram, Texas Agricultural Experiment Station, Substation-Angleton, Texas; American Journal of Veterinary Research, Vol. 19, No. 73, October, 1958, pp. 811-814.

ABSTRACT:

In four experiments a total of 45 Jersey bull calves were used in determining the effect of uniform dosage of T. axei and/or O. ostertagi on weight gain, feed consumption and feed utilization.

Attempts were made to raise all calves under conditions that excluded infection from nematode parasites, with the possible exception of Strongyloides organisms, until the time of artificial inoculation with controlled numbers of parasitic larvae. In the first three experiments T. axei larvae were given to one group of calves, O. ostertagi to another, and the larvae of both species to a third group. The fourth group served as controls. Calves in experiment 4 were given T. axei larvae only. The inoculation ranged from 118,000 O. ostertagi larvae alone to 224,100. Single inoculations of T. axei ranged from 242,000 to 1,000,000 larvae, while the combination infections of both genera ranged from 61,000 O. ostertagi plus 121,800 T. axei larvae to 110,300 O. ostertagi plus 223,200 T. axei larvae.

In the first three experiments all calves received rations which contained approximately 11% digestible protein and 65% total digestible nutrients. In Experiment 4 a ration containing 11% D.P. and 65% T.D.N. was compared with one containing 7% D.P. and 65% T.D.N.

Signs of clinical parasitism as such occurred only in two of the four infected calves in experiment four on the low protein ration, and in only one calf in the group on the high protein ration. With the possible exception of one infected calf in the first experiment, the degree of parasitism produced in Experiments 1, 2 and 3 did not appear to affect the rates of gain, feed intake and feed utilization. Although there was a trend for lower average daily gains in the case of the artificially infected calves in all of the experiments, the results did not show significant differences except in the case of the last experiment due to the variation in calf gains and the small numbers of experimental animals.

In the fourth experiment the average daily gains of the infected calves were considerably less during the five-week post-infection period (2.32 vs. —0.76 lb. for high protein group, and 1.34 vs. —0.46 lb. for low protein group). Feed efficiencies were also correspondingly poorer (explained by both reduced daily gain and less daily feed intakes). In spite of the poorer results secured in this experiment, experienced cattle judges could not accurately pick out infected vs. non-infected calves. Although infected calves on the high-protein ration showed a greater loss of weight than non-infected ones, unless controls were available for comparison, the selection of parasitized animals was difficult. It was also difficult to differentiate between infected and non-infected animals on the low protein ration because of their general overall unthrifty condition.

COMMENT:

This experiment sheds a little light on a very controversial subject—but still not enough! It indicates that possibly lower gains may be secured by artificial infection of calves with either T. axei (minute stomach worm) and/or O. ostertagi (medium stomach worm). Whether or not this is true under pasture or grazing conditions, especially with limited feed supplies, is still a question which must be answered. Also, it would have been interesting to know the results of the infected calves under longer experimental conditions—the post-infection period of only five weeks is probably too short to completely determine the deleterious effects of parasitism. It should be remembered in evaluating the results of this trial that few of the calves exhibited clinical signs of parasitism.

CHAMPION

MOBILE MILL EQUIPMENT

Process More Tonnage . . . At Lower Cost Per Ton

LARGER CAPACITY Champion's large, 2- to 3-ton mixing capacity, with fast and accurate grinding action, will process a high tonnage of top-quality feeds at a lower cost per ton than units of smaller volume.

LABOR-SAVING FEATURES More than two tons of bagged concentrates can be hauled on the large platform next to the mixer, thus saving extra truck and man-hour expense. And with Champion's new sheller arrangement, ear corn and grain are conveniently fed by the same feeder which feeds the hammermill unit—saving the expense of an auxiliary feeder. A simple control valve in the feeder-head diverts the ear corn into the sheller or into the mill unit as desired.

DEPENDABLE PERFORMANCE Champions are built to provide dependable, faster and more complete, on-the-farm service—day after day. You're assured more for your money, too, because Champion leadership, with more than 29 years' manufacturing experience, brings you this quality-built unit at the industry's most fair and honest price.

CHAMPIONS ARE BUILT TO BUILD YOUR BUSINESS—with larger capacity, labor-saving features, and dependable performance. Write for Bulletin 823 today.

CHAMPION PORTABLE MILL CO.

2109 COMO AVE. SOUTHEAST • MINNEAPOLIS 14, MINNESOTA

Egg Production Boost Places Alabama Sixth In Southern States

BIRMINGHAM, ALA. — Alabama is the only southern state that has shown an increase in egg production for 1958 over a year ago, with the increase amounting to 6% for the first half of this year.

The increase places Alabama sixth in egg production in the 16 south Atlantic and south central states. States leading Alabama are Texas, North Carolina, Georgia, Kentucky and Tennessee. Alabama is still producing only 65-70% of the eggs consumed in the state.

Alabama, as has been noted previously, has also been experiencing a broiler boom in the last few years, and along with Arkansas is vying with Georgia as the No. 1 broiler producer. Records for 1948 show that Alabama produced 6 million broilers, and estimates for this year are that the state will place 130 million broilers—over 20 times as many as 1948. Alabama is leading all states in the increases in broiler percentage this year over last year.

FEED FIRMS EXPAND

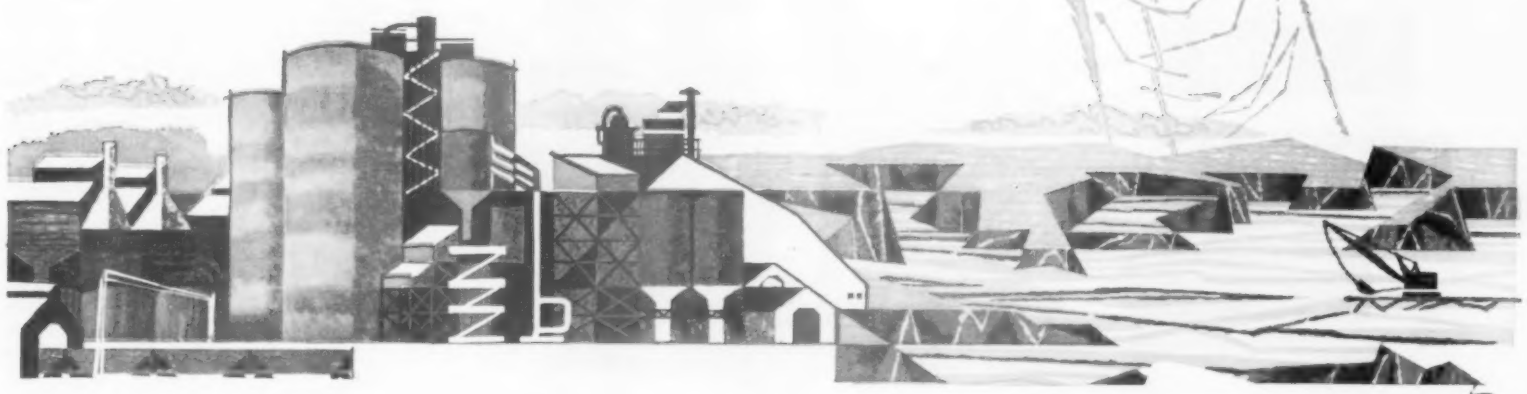
RICHLAND, GA. — Two Richland feed firms are expanding. H. L. Moore Co. has completed a large warehouse, and the Miller Co. has purchased an old oil mill site and is installing $50,000 worth of equipment.

NATURAL WONDERS

made dynamic by man

Powerful forces above, atop, and within our earth create and mold the crude treasures which man further improves to serve his needs.

. . . and raw phosphate deposits



made dynamic by modern chemistry to give you

dynamic DYNA·FOS®

today's most dependable feed phosphate

A lot happens to raw phosphate between the time International Minerals and Chemical Corporation scoops it from the ground and when you buy it as Dynamic DYNAFOS. Valuable phosphorus is extracted from the ore and is turned into beaded dicalcium phosphate, made uniform in quality, high in biological availability, low in fluorine, easy to mix and handle. It is made *feed dependable* . . . the big reason why you can count on Dynamic DYNAFOS to deliver full nutritional value from your feed formulas. Wire or call for full information.

Creators of Living Minerals

MINERALS International CHEMICALS

PHOSPHATE CHEMICALS DIVISION

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

Administrative Offices: Skokie, Illinois

Sales Agents: **EASTERN AREA:** GRANDONE, INC., Needham (Mass.) • SUNSET FEED & GRAIN CO., INC., Buffalo • P. R. MARKLEY, INC., Philadelphia
A. G. GREENE COMPANY, Charlotte (N. Carolina) • EDWARD E. SMITH COMPANY, Atlanta • E. A. CARTER BROKERAGE COMPANY, Tampa
CENTRAL AREA: BULLARD FEED COMPANY, Chicago • GOOD LIFE CHEMICALS, INC., Effingham (Ill.) • JOHN F. YOUNG COMPANY, Cincinnati
R. D. ERWIN COMPANY, Nashville • CHAS. F. WILLEN CO., INC., Birmingham (Ala.) • STANDARD SALES COMPANY, Meridian (Miss.)
THE VITA PLUS CORPORATION, Madison • **MIDWEST AREA:** BLOMFIELD-SWANSON, Minneapolis • M. A. McCLELLAND COMPANY, Kansas City (Mo.)
B. A. LUCIUS COMPANY, Fort Worth • **WEST COAST:** JAMES FARRELL & COMPANY, Seattle • JAMES FARRELL & COMPANY, Compton (Calif.)
CANADA: N. D. HOGG LTD., Toronto

JOE BROOKS

BY AL P. NELSON

Although the average feed mill does not have the glamor of a Broadway showhouse, it is nonetheless a stage, too. Here human beings who are engaged in wresting a living from the soil come to buy, with considerable haggling. Here they reveal in their dealings with the feed merchant whether they are generous or stingy, bullheaded, or open minded, ambitious or lazy, gossipy or tolerant, hermits or mixers, optimists or pessimists, hard or compassionate. For those who wish to see, all these human traits are expressed in and about the feed mill, for better or for worse.

The Boys Put on An Act

Joe Brooks, the alert dealer at Hansen's Creek—who also owned a branch mill and store at Endeavor—had initiated a skit contest among his employees. He had told them that there would be some handsome prizes, $50 first; $35, second, and $15, third, for the winning groups and their skits. The firms had 12 employees at the two stores and these were divided into three groups, each of which was to put on a skit, with three members of the Douglas District Feed Club as judges.

On the night when the first skit was to be shown, the large display room at Joe's mill in Hansen's Creek was full of people. Each employee was entitled to bring a wife or sweetheart, and so with the judges and a couple of salesmen, that made close to 30 people on hand.

Pop Henley's group, consisting of Milt Peters, Butterball Barlow and Blimp Hannon, had drawn first showing out of a hat two weeks ago. Now these four stood out in the mixing room, waiting for Joe to announce their skit and the contest. Milt had brought a good looking redhead to the meeting, and now and then he peeked into the salesroom just to make sure no salesman was trying to "beat his time" with the gorgeous unprotected sweater girl.

"Gee, I'm kind of nervous, Pop," Milt said. "Now I know how movie actors feel."

"Me, too," Butterball declared. "I—I haven't stuttered for years and now all of a sudden I feel like s-stuttering, see?"

Blimp Isn't Nervous

"I ain't nervous," put in roly-poly, jolly Blimp Hannon. "I've been in too many Elks minstrel shows to get nervous."

"You missed two practices last week, that's why you're nervous," Pop accused Milt. "Out with redheads, I'll bet. Now you'll pay for it."

By this time Joe Brooks had finished making the introductions for the skits, and he rang a cowbell. That was the signal and some of Pop's group ambled onto the set which showed the inside of a feed store.

"Gosh," said Blimp Hannon, looking at his watch. "Do you know that we are 10 minutes late? And we've been late a lot of times lately. We're slipping."

"Huh, who cares?" Milt said. "The boss never gets down until eight or sometimes nine. The few farmers that come here early and find nobody here at seven or five after, just go elsewhere and buy. But there ain't many of them. We don't lose much business that way."

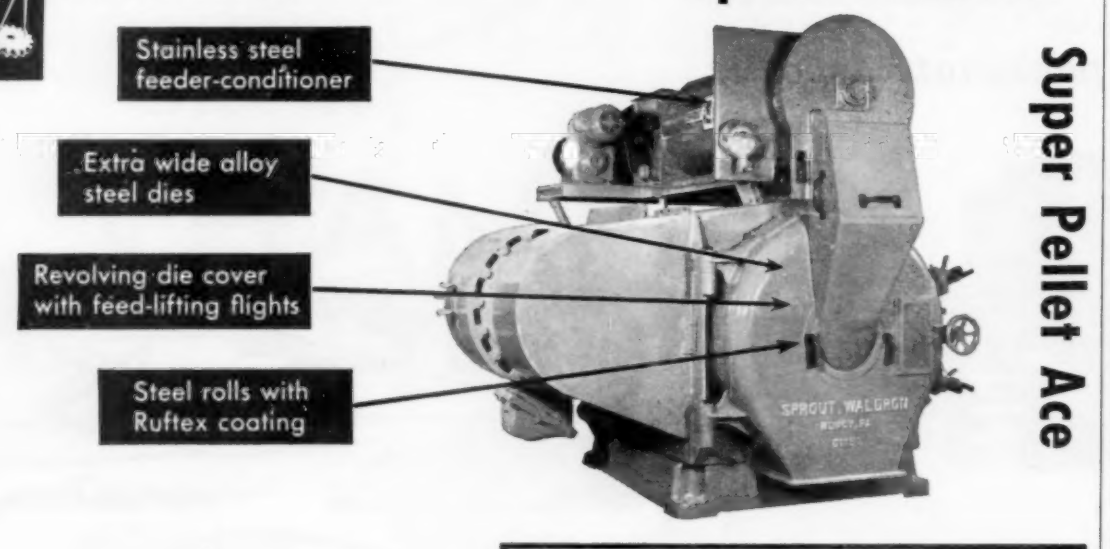
"You know," said Butterball Barlow, "when some feed dealers go into business they are at the mill a half hour before anybody else, and they stay late at night after closing time. But some of them—like our boss—when the business gets going along on a prosperous basis, start to take it easy. They get to work late, they take two hours for lunch, and they go home early so they can golf, or fish, or hunt. They seem to think that once a business is organized it should go along by itself."

At this point several people grinned at Joe Brooks. All knew that this exaggerated picture of what

SW Data Sheet

Sprout-Waldron

Super Pellet Ace


Stainless steel feeder-conditioner
Extra wide alloy steel dies
Revolving die cover with feed-lifting flights
Steel rolls with Ruftex coating
SPROUT, WALDRON

SUPER PELLET ACE with wide wide die

More and more feed millers are discovering that higher pelleting profits are possible with the Super Pellet Ace. High volume production, coupled with low power and low maintenance, makes this gearless, belt-driven pellet mill the most economical and profitable on the market.

construction details

The corrosion-proof feeder-conditioner offers perfectly controlled feeding, uniform moisture and heat penetration of feed, plus low upkeep. The stainless steel spout is easily removed for fast die changes or roller repairs. A built-in dial thermometer enables operator to maintain uniform temperature of feed at all times.

The hinged die casing provides easy access for die changes and greatly reduces clean-up time. The Super Pellet Ace utilizes a V-belt drive which eliminates gears and their maintenance while applying the full horsepower to extra wide dies for increased capacity. A revolving die cover and feed-lifting flights assure even wear and longer life of special alloy rolls. The entire mill requires only four bearings. Relatively quiet and vibration-free operation is secured.

Sprout-Waldron pellet mills are available in smaller, lower powered designs.

We also manufacture the most complete line of pelleting accessory equipment such as driers, coolers, and crumblizers.

specifications

Floor space	6′ 5¼″ x 6′ 3¼″
Height to feed inlet	5′ 4″
Size of feed inlet	12″ x 18″
Size of outlet discharge	8¾″ x 15″
Size of steam inlet pipe	2″
Feeder motor	2 hp.
Mill motor	100 to 125 hp.
Weight, mill with feeder-conditioner	4725 lbs.
Weight, STD.TEFC 100 hp. motor	1700 lbs.
Recommended boiler hp. for 100 hp. mill	40 hp.

Write for Bulletin No. 201

FD/104

SPROUT-WALDRON

The Best in Processing Equipment Since 1866

MUNCY, PENNSYLVANIA, U.S.A.

Modern equipment for—size reduction • mixing and blending • bulk handling equipment • size classification • pelleting and cubing

HONEGGER DEALERS PROFIT from the BIG FRANCHISE

BIG 4 FEATURES

Franchises available in some areas

WRITE, WIRE or PHONE

Honeggers' & Co., Inc.
Fairbury, Illinois

FEED

CHIX

FARM BUILDINGS

EQUIPMENT

some feed dealers do was pointed at him—all in fun, so it seemed. Joe had had no idea of what each skit would be. He had left the ideas up to the captains of the teams. But he was a good sport and laughed at this picture of a feed dealer, just as the others did.

"Well, I tell you," Blimp Hannon said, almost like a bank director, "a boss is different from an employee. He don't have to work by the hour. He uses his brains. By using his brains he can make more in one hour than he can working all day with his muscles like we do."

"Maybe so," Milt observed. "But suppose when the brainy boss is out after doing his braintrusting, some customer comes in and asks for him, and will talk to nobody but the boss?"

Butterball Barlow looked puzzled. "Yeah, well, that is a horse of a different color," he admitted. "I suppose even a feed dealer can't eat his cake and have it, too."

"Some bosses are awfully inconsiderate," Blimp Hannon said. "Some will walk around all day smoking those terrible 5¢ cigars when talking to us and to customers. That's bad business. Even I know that much."

"And some have to smoke an old corn cob pipe when they work on ideas," Milt Peters said, an obvious reference to one of Joe Brooks' habits. "A pipe like that begins to smell pretty bad after five years' use —even to friends and customers."

"But maybe the smoking of an old corn cob pipe helps the dealer get ideas that bring in more business, and so employees should put up with it," declared Butterball.

"Bushwah!" snapped Milt Peters. "How could it? The dealer only thinks the pipe helps. He could chew gum instead and that would be just as good."

"Well, what I don't like about bosses is that when they come down late to work in the morning, or go off to a three-day convention or something like that," Blimp Hannon said, "then when they come back they get mad that we haven't done what they think we should have done."

"I'm with you on that," Milt said. "They don't tell us what to do when they are gone, they don't leave written instructions. They expect us to read their minds. And that's too darn hard work for $50 to $75 a week. Psychiatrists charge much more than that to read minds. They charge more to read dirty minds."

"Ssh," cautioned Butterball. "Here comes the boss now—home from that convention. Grab a broom everybody and look busy!"

At this point Pop Henley, wearing storm coat and grey hat came in from the mixing room. He was carrying a bulging briefcase and smoking a cigar. He walked with speed to his desk, and he still wore his convention badge—evidently he had been too hurried to find the time to take it off.

He looked in astonishment at his three employees, one was sweeping rapidly, one was dusting, one was straightening shelf stock. The air was full of floating dust, and Pop began coughing.

"Hey, wait with that cleaning!" he called irritably. "Why didn't you fellows clean up when I was gone?"

"You didn't tell us to, Boss," put in Milt mildly.

"And look at that window display. It's been in over three weeks now," roared Pop. "Why didn't you change it, Blimp? You're in charge of window displays."

"Me!" echoed portly Blimp. "Why the last time I changed a window you bawled the livin' — out of me, because you said it was too soon. And when you went to the convention you didn't say a word."

"I forgot!" thundered Pop. "I was in a hurry to make a train. Gosh, do I have to tell you fellows every darn thing I want you to do?"

"I dunno, Boss," put in Butterball, "but we'd appreciate it if you'd give us a schedule of what you want done. We're kinda at a loss when you go off like this."

"Oh, you are, are you?" growled Pop. "Well, if you were running a blankety blank feed business in an area where there are a lot of doggone chiselers and price cutters and farmers that don't pay their bills, you'd forget some things, too. When I go on a trip, I got it coming to me. It's relaxation from the cares of business. A dealer owes it to himself to get away once in a while."

"So does an employee," Milt muttered to himself.

Pop Henley threw down his briefcase on the desk. "I'm going over to Happy's to get a cup of coffee. Get the place cleaned up by the time I come back!"

After Pop had flung himself out the door, Milt turned to Butterball and asked, "Now what in the world did we do to make him so mad?"

"Nothing," replied Butterball, who looked a little scared. "Absolutely nothing!"

Georgia Egg Volume Down, Prices Steady

MACON, GEORGIA — November egg receipts reflected a lower volume in comparison to the same month last year, the Georgia Department of Agriculture reported.

Prices to retailers, as well as prices paid by first receivers, averaged the same as October, although substantially lower than the corresponding period last year.

A total of 43,400 cases were received in Atlanta for the month compared to 70,300 in November last year. Of these, 22,800 were of Georgia origin, 14,900 from Iowa and 4,100 from Minnesota.

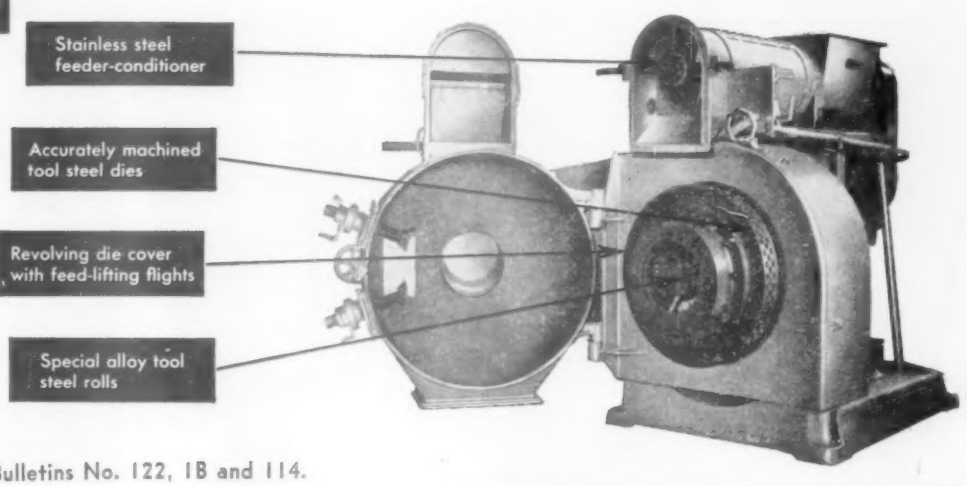
In November last year, 35,800 cases were reported from Iowa and 26,900 from Georgia.

Prices to retailers were 53.72¢ a dozen for Grade-A, Large Whites, compared to an average of 53.54¢ in October and 62.97¢ in November a year ago.

SCROGGINS GRAIN CO.
Phone FE 5-3913 — Teletype: MP 344
WHOLE and GROUND GRAINS
and SCREENINGS
MINNEAPOLIS, MINNESOTA

IT'S Eye Appeal
that really
COUNTS and
GRAN-I-GRIT
Has Eye Appeal for Poultry of All Ages
NORTH CAROLINA GRANITE CORP.
MOUNT AIRY NORTH CAROLINA

S W Data Sheet
Sprout-Waldron
Pellet Mills


Stainless steel feeder-conditioner
Accurately machined tool steel dies
Revolving die cover with feed-lifting flights
Special alloy tool steel rolls

Write for Bulletins No. 122, 1B and 114.

PELLET ACE

More and more feed millers are discovering that higher pelleting profits are possible with the Pellet Ace. High volume production, coupled with low power and low maintenance, make this gearless, belt-driven pellet mill the most economical and profitable on the market.

construction details

The corrosion-proof feeder-conditioner offers perfectly controlled feeding, uniform moisture and heat penetration of feed, plus low upkeep. The stainless steel spout is easily removed for fast die changes or roller repairs. A built-in dial thermometer enables operator to maintain uniform temperature of feed at all times.

The hinged die casing provides easy access for die changes and greatly reduces clean-up time. The Pellet Ace utilizes a V-belt drive which eliminates gears and their maintenance while applying the full horsepower to the dies for increased capacity. A revolving die cover and feed-lifting flights assure even wear and longer life of special alloy rolls. The entire mill rides on only four bearings. Relatively quiet and vibration-free operation is secured.

The S-W Pellet Mill is also available in the higher powered Super Ace, wide, wide die design as well as in the smaller, lower powered Junior Ace.

We also manufacture the most complete line of pelleting accessory equipment such as driers, coolers and crumblizers.

specifications

Floor space	6' 5¼" x 6' 3¼"
Height to feed inlet	5' 4"
Size of feed inlet	12" x 18"
Size of outlet discharge	8¾" x 15"
Size of steam inlet pipe	2"
Feeder motor	2 hp.
Mill motor	50, 60, 75, 100 hp.
Weight, mill with feeder-conditioner	4625 lbs.
Weight, STD. TEFC 75 hp. motor	1500 lbs.
Recommended boiler hp. for one 75 hp. mill	40 hp.

FD/102A

SPROUT-WALDRON
The Best in Processing Equipment Since 1866
MUNCY, PENNSYLVANIA, U.S.A.
Modern equipment for—size reduction • mixing and blending • bulk handling equipment • size classification • pelleting and cubing

Amino Acids—Part 4

Amino Acid Requirements of Poultry

By Dr. Richard S. Gordon
Monsanto Chemical Co.

EDITOR'S NOTE: This is the fourth in a series of articles on amino acids in animal nutrition. Several papers on amino acids were presented at the annual meeting of the Animal Nutrition Research Council in Washington, D.C., and these papers are being published in Feedstuffs. The accompanying article is from a paper presented by Dr. Richard S. Gordon of the Monsanto Chemical Co., St. Louis.

Since the National Research Council established the amino acid requirements of poultry in 1954, many conflicting reports have been issued on this subject. In these more recent studies the investigators have utilized purified and semi-purified as well as practical diets. In spite of this there appears to be little reason to alter these National Research Council (NRC) recommended requirements for amino acids. It should be clearly understood, however, that these requirements apply to one specific level of protein and calories. The more important reasons why it appears unwise at this time to make any major change in the NRC amino acid requirements, despite the abundance of new work, are:

1. The protein sources used in these reports differed markedly in amino acid availability and content.

2. Very often the energy level remained an uncontrolled variable.

3. Too little attention was paid to the absolute growth rate, feed conversion or egg production obtained, while too much attention was paid to relatively small differences in performance between supplemented and unsupplemented groups.

4. In several of the studies, where it was concluded that the NRC requirements should be changed, the influence (either positive or negative) of other metabolic intermediates on the requirements for that amino acid was ignored.

The more recent studies of amino acid requirements lead one to believe that the challenge of the future is in the evaluation ot the factors which modify amino acid requirements in a predictable way; that is, it appears that the NRC requirements are more useful as estimates of the relative ratios or balances of amino acids required than they are as estimates of minimum or maximum levels that must be present in a specific ration. A summary of the factors known to modify amino acid requirements (in a predictable way) follows:

1. Effect of Protein Quality on Amino Acid Requirements. Most workers have utilized isolated or purified proteins to furnish all amino acids required by the animal, usually limiting their study to the one or two amino acids that are the most deficient in the test protein relative to the bird's needs. Such proteins as casein, soybean alpha protein, lactalbumen, etc., have been used with great success. The requirements found are still largely consistent with older work and reinforce our conviction that the current list of NRC amino acid requirements really covers a special situation: a deficiency of one or two amino acids in the presence of an excess of all others with most of the amino acids being derived from proteins of relatively high biological availability. In addition, with the purified proteins, there tends to be a constant relationship between the amino acid requirement and the analytically determined amino acid content of the test protein.

2. Translation of NRC Requirements to Practical Diets. Translation of the NRC requirements to practical diets is, at best, only an approximate process, since feed ingredients that possess the same nitrogen content often differ widely as to the level of biologically available amino acids contained in the protein. It is fortunate that soybean meal is used in poultry feeds as the primary source of protein, with the other protein sources used largely to remedy the nutritional deficiencies inherent in soy protein. Because of the standardization of soy processing and the fact that the limiting amino acids in soybean meal are largely methionine and glycine, the NRC amino acid requirements can be used in calculating the requirements for practical poultry diets.

Additionally, one has approximately the same situation that existed when these same requirements were

(Turn to **AMINO ACID**, page 31)

MORE Pigs to Market SOONER
(and BETTER)

Imported and domestic, purebred, and cross-bred commercial Landrace hogs are paying off for A. H. Myers & Son at Trimble Manor Farms Trimble, Mo. They feed hog supplements containing up to 10% dehy.

with **DEHY** on the menu!

"PIG PARLORS" ARE PAYING OFF...

Swine producers are looking to the feed manufacturer for improved formula feeds to assure them best results from today's modern feeding operation. With the trend to feeding more hogs in dry lot instead of on pasture, rations need to be more nutritionally adequate The best substitute for green pasture is dehydrated alfalfa.

IF THEY'RE NOT ON PASTURE, THEY NEED DEHY

If They are on Pasture They Still Do...

Dehy fed to sows increases ovulation rate to produce bigger litters . . . reduces mortality . . . stores vital growth factors in the baby pigs. *Dehy fed to growing pigs* builds healthier pigs, controls energy intake to produce a superior carcass.

Research Proves Value of Dehy

"Several experiment stations have shown that high-quality alfalfa meal contains some unidentified factor or factors which are of value for pigs during growth and which influence the ability of the pigs to conceive, reproduce and lactate many months later."

Dr. T. J. Cunha
University of Florida

"Ten percent or more of alfalfa meal should be included in all drylot protein supplements for swine. There is no single feed ingredient that contributes more to balancing swine rations during pregnancy in dry lot than dehydrated alfalfa meal."

Dr. W. M. Beeson
Purdue University

Write for Free Report to:

American Dehydrators Association
PASTURE IN THE BAG

AMERICAN DEHYDRATORS' ASSOCIATION
430 BOARD OF TRADE KANSAS CITY 5, MISSOURI

MEMBERS THROUGHOUT THE NATION TO SERVE YOU...

THE BEST ROLLER MILL MADE

W-W crimps, cracks or crumbles every kernel. Has hardened "mill-type" rolls; single control wheel adjustment; heavy cast iron framework. Available in 6" to 36" widths. Sensible time-payment plan.

W-W GRINDER CORP.
DEPT. 311—2917 No. Market Wichita 4, Kans.

VITAMINS
PRECISION BUILT FOR PRECISION NEEDS
VITINC VITAMINS, INC.

BASIC MATERIAL MANUFACTURERS and HEADQUARTERS FOR TECHNICAL INFORMATION
Write or Wire Your Requirements
VITAMINS, INC.
800 W. 58th Street, Chicago 21, Ill.

Only

DR. SALSBURY'S

UNISTAT®

has stood the test so well!

Now THE PROVEN PRODUCT OF CHOICE FOR PREVENTING COCCIDIOSIS

This year's unusually rainy and humid weather has resulted in heavy outbreaks of Coccidiosis. During this period Dr. Salsbury's Unistat has been fed out to over 40 million birds. Our extensive investigations show that there have been very few if any outbreaks of Coccidiosis in flocks that have been medicated with Unistat.

Why? Because Unistat was thoroughly tested before it was placed on the market. These tests proved that Unistat's unique new formula combining a new drug discovery with other time-proven drugs gives a high degree of protection against the economically important forms of Coccidiosis. Unistat not only prevents Coccidiosis breaks . . . but at the same time permits birds to develop their immunity through controlled, sub-clinical infection.

OTHER *plus* ADVANTAGES

Unistat also stimulates growth . . . improves feed conversion . . . gives birds better pigmentation.

Only Unistat has stood the test against Coccidiosis so well making it the product of choice for the prevention of Coccidosis. Write for detailed data on Unistat today.

Feed Products Division
DR. SALSBURY'S LABORATORIES
Charles City, Iowa

Dr. SALSBURY'S

nation-wide service to the poultry industry

OUTLOOK

INTEGRATION . . . and the Feed Industry

By Dr. G. B. Wood
Oregon State College

Dr. G. Burton Wood

AUTHOR — Dr. G. Burton Wood is head of the department of agricultural economics at Oregon State College, Corvallis. Dr. Wood, a native of Oregon, attended Oregon State and the University of Oregon as an undergraduate. After several years in business, he returned to OSC for his master's degree. He received his Ph.D. degree in agricultural economics (marketing) from the University of Wisconsin. He was with the Farm Credit Administration and U.S. Department of Agriculture, and then was on the Purdue University staff for seven years. In 1951, he became head of the OSC agricultural economics department. Dr. Wood has been or is a member of several advisory and other committees and councils relating to agricultural economics, including the American Feed Manufacturers Assn.'s College Feed Survey Committee and the Poultry Survey Committee. He also has served as an officer of the American and Western Farm Economics associations. Dr. Wood is considered one of the leading authorities on contract agriculture and was a member of a panel discussing this subject at the last AFMA convention.

Two powerful forces are exerting a strong influence on the decision-making process of the modern super farm. One is the desire of these farmers to improve their access to a preferred market. The other concerns the need of farmers to strengthen financing arrangements. Both are related, of course. As these super farms move more and more toward a factory system, the pressure of these two forces will exert stronger and stronger influences on the decisions of commercial operators.

It undoubtedly will pay dividends for feed dealers and feed manufacturers to re-examine their business policies in relation to these two forces.

ACCESS TO MARKET CRITICAL: The most critical problem facing modern super farms is to find a preferred market for the farm output. Our productive horsepower in agriculture has out-distanced our marketing horsepower at satisfactory prices. So, with competition becoming keener in the market place, it is no wonder that farmers are critically weighing the advantages and disadvantages of their present marketing arrangements.

The ability of the modern super farmer to sell his farm output to advantage has become more difficult than his corresponding ability to buy production supplies to advantage. As a consequence, farmers are placing a higher priority on access to market than they are on an access to a source of production supplies.

During the past year, many owners of these modern farm factories have quit buying feed and other supplies from long-time sources in their communities. Who got the business? Some firm that worked out a better access to market for the farm operator. The feed and other supply business represented the premium paid for a better access to market.

Feed dealers, feed manufacturers and other farm supply firms may want to examine their "hole cards" to see if they can continue to maintain or expand their supply volumes in 1959 and later years without taking some steps toward providing **access to market** for their farm customers. The same challenge lies in the area of financing.

The time is probably closer than we realize when the "access to market" of some feed dealers may be going, going, gone! Competition will have moved in to siphon off part or all of the profitable supply volume of a particular dealer. The marketing-supply package will have taken over. The chances are that the better customers will be the first to go for this package. The feed dealer will be left with the less desirable and more-costly-to-serve customers. Such a change could have serious impact upon business volume and profit margins. Hence, the need to stop, look and listen to be sure that the business policies of each firm are on sound ground.

THE MARKETING - SUPPLY PACKAGE: The big question confronting feed dealers and feed manufacturers today is not only one of whether to provide the marketing-supply package but also one of how far to go once the step is taken. The answer is not push-button simple. It involves a complex of decisions which runs the gamut from procurement to distribution.

Most feed dealers are not anxious, I suspect, to change from conventional operations to some form of an integrated program. Change is not always easy. Likewise, it is often costly. Certainly, there is no point in changing operations unless careful study and analysis point the way.

There is considerable evidence to suggest that the marketing-supply package represents both a threat and an opportunity to the feed industry. It can be a very real threat to those firms which shut the door to investigation and who say "it's not for me." It may be a solid, competitive opportunity for those firms which find a way to make the marketing-supply package a profitable partner in their operations. The challenge is that many have done so, and have expanded their market for feed as a consequence.

The marketing-supply package is inevitably tied in with integration and contracting. It is a force which will push the expansion of integration. The only real issue involved is who will move forward first and most with the integrated program.

INTEGRATION A USEFUL TOOL: That word "integration" is probably one of the most misunderstood terms in business management. There is nothing new about it. Its spread in some segments of agriculture in recent years is, of course, new. But its growth is the result of economic forces and change — not the cause of it.

Perhaps one of the most promising uses of integration is to speed up the trend toward **specification production.** Specification production enables the food industry to obtain from super farms the items which are most desired for today's mass food distribution system. The contract is an established and tested device for tying specification buying into the factory system of modern agriculture. Price alone has not always brought forth the desired foods as speedily or as efficiently as was desired. When specifications and price are tied together in a contract, farming can be geared closely to needs of mass food markets.

In some areas and for some farm products, the only access to market available to growers is by means of contracts. The marketing or processing firm decides how much of each product shall be produced. The marketing firm is able to make a better aggregate decision on this than can the individual growers themselves. In a sense, farmers in these situations face a "closed market." It is something akin to the union shop for labor.

There are clear indications that the concept of the closed market will spread to more farm products in the decade ahead. The supply business may follow the market and be "closed" to many supply firms also.

"Feed dealers and manufacturers may want to examine their 'hole' cards to see if they can continue to maintain or expand their supply volumes in 1959 and later years without taking some steps toward providing 'access to market' for their farm customers. The same challenge lies in the area of financing."

IS A MARKET-SUPPLY PACKAGE FEASIBLE? The feasibility of any marketing program will vary from firm to firm. Undoubtedly many good opportunities do exist for some firms which are willing to make bold changes in both management and operating policies. The first major step is to take a hard look at the possibilities of providing a more stable market for some of the customers served by the feed business. Few firms can furnish all the marketing services which a farming area may require. But it likely is feasible to provide marketing services for an important group of customers.

A marketing program can be set up on a direct or on an indirect basis. With a direct program, the firm must provide the marketing service itself. In some cases it may require processing. With the indirect program, the firm works out a two or three-way deal which will bring the producer and a preferred buyer together.

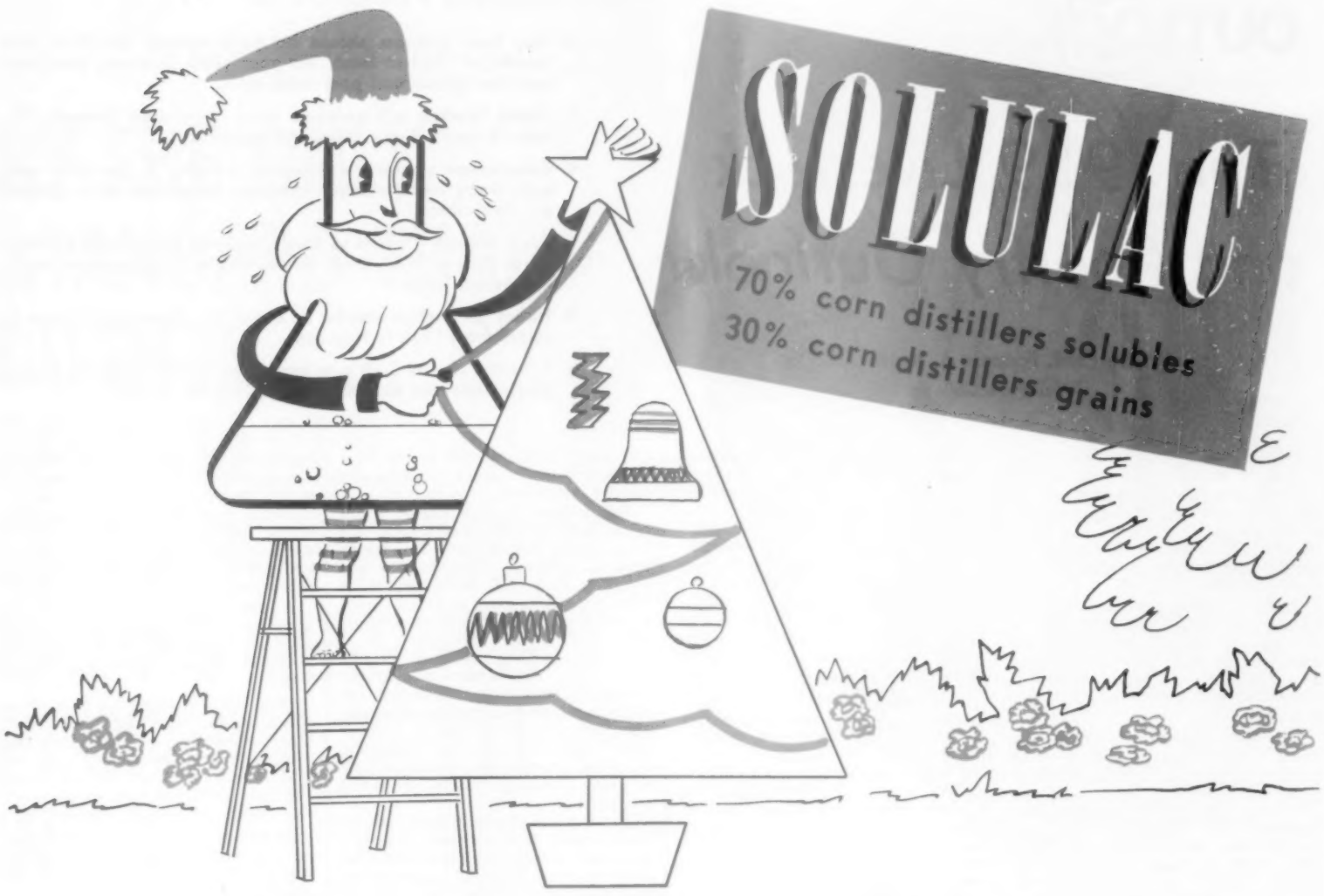
Firms exploring the direct route of setting up a marketing department or program soon come face to face with an important question. Is it best to develop the market ahead of the supply—or vice versa? Obviously the two programs are related.

Finding a stable market outlet would appear to be the most difficult assignment. No one gives up an established market easily or willingly. Someone must be displaced. Therefore, it would seem that the most important first step is to explore the market possibilities for the particular farm product. Once this potential is known, production needs can be calculated and programmed.

The indirect method of bringing a group of producers together to supply a particular market involves much less investment and risk. The feed firm, however, has little if any control over this marketing arrangement. Profit opportunities lie primarily in maintaining the firm's access to its feed market. New market outlets can always go direct to the producers and by-pass the feed firm which tied the package together in the first place. The supply business may go, too.

If a marketing program is sponsored, some form of a built-in field service program seems to be a must. It assures that the firm will have contact with the growers; it assures that specification production for the special market will be maintained; and it also provides a competitive wedge with many growers who like the idea of this personal and technical service. Built-in supervision is a factor which has caused many growers to shop around and finally shift from an open to an integrated marketing program.

Finding answers for tomorrow's needs is not easy. It may cost some money to decide which way to go. But the chances are high that the time and money invested in analyzing every opportunity, including the marketing-supply package, will more than pay for itself in the years ahead.



IT'S SURE TO BE HERE EVERY WEEK OF THE YEAR

Solulac production is not just a seasonal thing. You can formulate your feeds with it and be sure of a supply every week in the year. Solulac is your steady source of high nutritional values . . . unidentified growth factors...vitamins. Guaranteed to be free flowing. And it's yours, whenever you need it, in 50 and 100 pound bags or bulk carloads. Write, wire or phone. Grain Processing Corporation is also your continuous source of corn distillers dried grains.

Copyright 1958

GRAIN PROCESSING CORPORATION

MUSCATINE, IOWA • Telephone AMherst 3-1321 TWX 495

Primary Fermentation Products

Riboflavin — Vitamin B-12 — Bacitracin — GP-101, source of whey and other unidentified growth factors.

OUTLOOK

The 1959 Livestock and Poultry Outlook

By Prof. Francis A. Kutish
Iowa State College

Feed Business Prospects for '59:

- **Hog feed business should be good through the first nine months of 1959 at least. The year 1960, however, could see very low prices and poor feed sales.**
- **Cattle feeding will continue on a large scale through '59. Sale of cattle feeds should be good.**
- **Government supports will remain a factor in the dairy outlook. Dairy cattle numbers continue downward, while output per cow climbs.**
- **There are more layers on farms, and egg prices may average lower than in 1958. Birds raised for flock replacement likely will be cut back.**
- **Turkey production may be up about 5%. Not much change in prices from 1958 is foreseen.**
- **A further rise of 5-10% in broiler production is likely. Prices, particularly the first six months, will be down.**

The bumper feed supply dominates the whole 1959 livestock and poultry outlook. It is causing an expansion of livestock numbers. The greatest increase is in hogs, but cattle and sheep numbers likewise are beginning to increase. And broiler production continues its upward trend.

Thus, demands for feed will be greater in 1959 than in 1958, but not enough greater to utilize all of the 1958 feed production. Approximately 17 million tons of feed grain will be accumulated in 1958-59 to add to our carryover.

The implication of this to the livestock outlook is clear; if we assume that two pigs are capable of being produced for every one ton of feed available, this means we could feed approximately 35 million more pigs in 1959 than we probably will raise. This would be equivalent to an increase of 35% over what actually will be produced. Such an increase, if it did take place, would drop hogs down around the 5 to 8¢ level. (But of course this big an increase won't happen. This example is cited to give some idea of the pressures that are latent in the feed situation.)

Low prices and large feed grain supplies are certain to increase livestock output sooner or later. The big question is whether the increase will be orderly and moderate. We will be headed for trouble if output of livestock and livestock products is expanded more rapidly than warranted by market demand.

GENERAL DEMAND: The recovery from the 1958 recession is continuing, with further gain in prospect for 1959.

Approximately two thirds of the 1958 drop in the general economy was brought about by a change in business inventories. The second important factor was the slow-up in business investment outlays for new factory construction and equipment.

The recovery was touched off by a slacking in the rate of inventory reduction, a spurt in new housing starts, and a halt in the decline in the business investment for new factories and factory equipment.

The reduction of business inventories will likely end, and we may see some actual increase in inventories as 1959 progresses. Consumption of goods is high and increasing. Business inventories now are about back to the same relation to sales as they were in the fall of 1956.

It appears that the sharp decline in investment by businessmen in new factories and factory equipment has come to a halt. In fact, many business observers anticipate that we may actually get some increase in spending for this purpose during the latter part of 1959. Corporate profits are rising sharply.

But while business is likely to improve during 1959, and thus provide a continued strong base for demand for farm products, there is a question as to whether the increase will be enough to completely eliminate the unemployment problem. There is real question whether the increase will be enough for this purpose.

Domestic demand for farm products, now at a high level, thus, will likely strengthen further in 1959. The 1958 recession had little effect on demand for food. In fact sales at retail food stores were above the same period for 1957. With continued improvement in the economy, consumer spending for food should rise further.

The difficulties facing farmers, therefore, are not result of weakness in demand. It is the supply side which causes the trouble. Farm output last year was a record high. And surplus stocks are increasing. Supplies will continue very large in 1959. Heavy feed supplies and favorable feeding relationships are encouraging expansion of livestock output—particularly for hogs, cattle, eggs and poultry.

Costs, too, are mounting. Thus, net farm income for the nation as a whole in 1959 may be from 5 to 10% lower than in 1958. The reduction is likely to be somewhat greater in the Corn Belt because of the greater impact of the lower prices for hogs, the smaller profits in cattle (resulting from the higher purchase price of feeder cattle) and the effects of the ending of the acreage reserve payments.

HOGS: Hogs from the about 15% larger 1958 fall pig crop will appear on the market in volume about midwinter. Approximately as many hogs will be on the market in March of 1959 as were sold by farmers in October of 1958. Market supply this winter will cause a sag in hog prices, in contrast with last year when hogs rose steadily through mid-and-late winter.

The summer hog price peak is likely to come earlier in 1959 than a year ago and will not be as high—due to the larger 1959 spring pig crop being raised. The summer and fall decline in hog prices will be more rapid than a year ago. This again is due to the large increase in winter litters. Hog prices during the last three months of 1959 will depend upon the size of increase in the late spring farrowings. An extreme expansion in the late spring farrowings is not expected—although it could occur. If the total spring pig crop is not up over 15%, the hog prices are not likely to get low enough next fall to produce a below-average hog-corn feeding ratio.

A further increase in the 1959 fall pig crop is expected. The increase may not be as sharp as that of this past fall, however—probably around 5 to 8%.

Thus, 1960 is more likely to be a period of disastrous hog prices rather than 1959. Feed business with hog producers should be good through the first nine months of 1959 at least. The year 1960, however, easily could be a poor year for sale of hog feeds.

CATTLE: Cattle and calf slaughter last year dropped about 4½ million head from 1957. This, in turn, enabled an increase of 2 or 3 million in the number of cattle on farms Jan. 1, 1959. About 90% of last year's slaughter cut-back was in cows and

(Turn to page 24)

Prof. Francis A. Kutish

AUTHOR—Prof. Francis A. Kutish, department of economics and sociology at Iowa State College, is well known for his presentation of farm economic information. He is editor of Farm Policy Forum, and writes the monthly farm outlook section in Iowa Farm Science, both of which are published by Iowa State College. He also writes a weekly Iowa Farm Outlook Letter. A native of New Hampton, Iowa, Prof. Kutish is an agricultural economics graduate of Iowa State College. He is a member of the Iowa Agricultural Extension Service staff and also conducts research in agricultural economics. He has written articles on outlook and agricultural economics for all the major farm publications and has made numerous appearances as a speaker. He is a member of the American Farm Managers Assn. and other professional and honorary groups.

PROVE TO YOURSELF THAT NO OTHER SALT

FLOWS MORE FREELY

MIXES MORE EVENLY

MAKES FORMULAS MORE EFFICIENT

Than—

BARTON

Mixing Salt

In bag or in bulk, you'll find every desirable mixing quality in BARTON Mixing Salt. BARTON'S pure evaporated salt, plain or iodized, is readily available to provide trouble-free mixing for the feed manufacturer. Available, too, with trace minerals if your formula requires them. Prove to yourself that there is none finer than BARTON Mixing Salt.

FEED DEALERS—
Provide your customers with the extra margin of assurance they get when they supplement every ration with BARTON SALT. In bags or blocks. It is available with or without added minerals. Keep plenty on hand.

THE BARTON SALT CO.
HUTCHINSON, KANSAS

The Salt Cellar of America

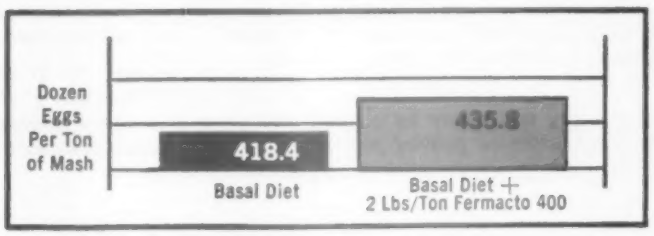
BY THE ONLY STANDARD THAT COUNTS... PROFITABLE EGG PRODUCTION... LAYING MASHES PERFORM BETTER WITH...

Borden's fermacto 400

A unique blend of multiple fermentation factors...only two pounds per ton, on an all-mash basis, provide complete unidentified growth factor fortification... at a cost of only about *twenty-five cents.*

Tests have shown that Fermacto 400, when added to egg mashes already considered complete, can help produce as many as seventeen dozen *extra* eggs per ton of feed. Here is practical proof of performance:

48-week test on Single-comb White Leghorns in laying house



OVER 17 DOZEN EXTRA PER TON OF MASH

Results of a number of practical feeding trials are available for review. Write Borden's, or ask your Borden field representative for these test data... to see just what Fermacto 400 can mean to *your* program.

THE *Borden* COMPANY
FEED SUPPLEMENTS DEPARTMENT
350 Madison Avenue • New York 17, New York

BETTER FEEDS THROUGH RESEARCH

Laboratories and test farms at Elgin, Illinois.

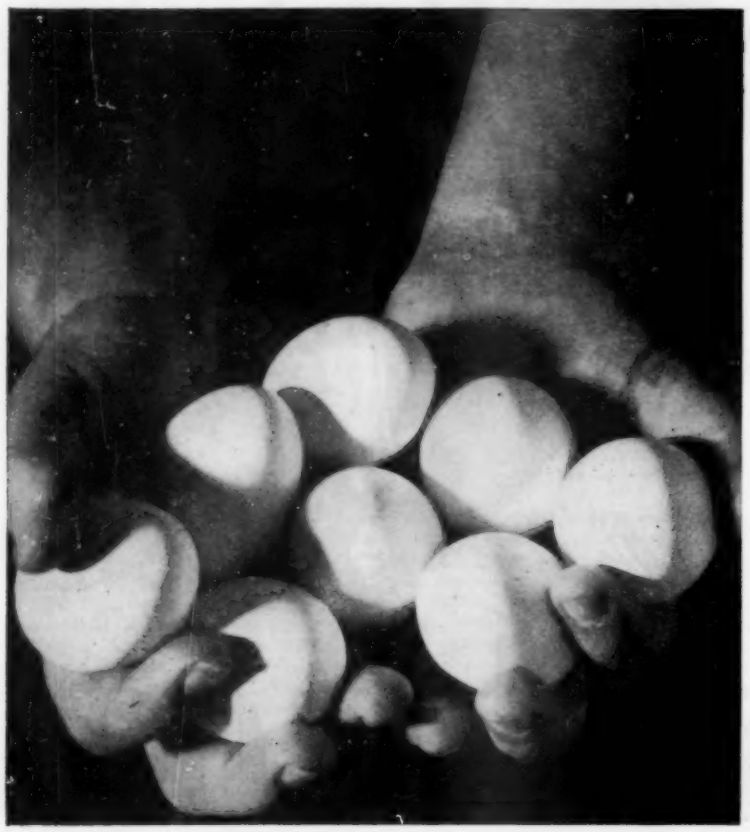
Borden's 300

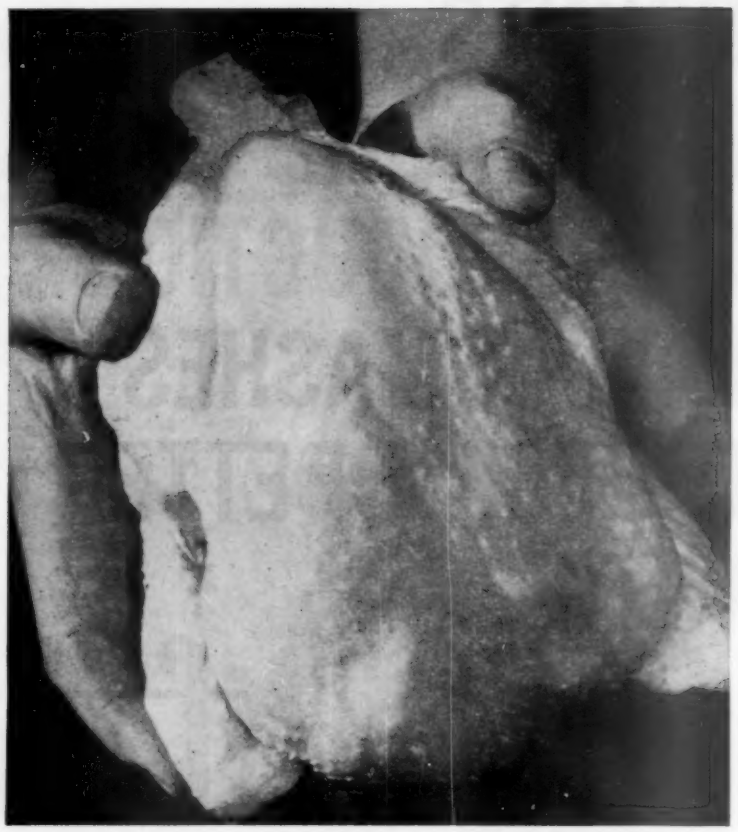
...for more efficient, more economical egg production...without wasteful over-fortification...and, at a cost of only about $1.10 per ton.

All necessary vitamins and minerals have been blended with Fermacto 400 in one convenient, complete supplement for laying mashes. Write for details.

2 POULTRY PROFIT AIDS

STONEMO Granite Grit





SELL GIZZARD GRINDING
and More Eggs from Your Feed

For extra eggs, your customers' birds need gizzard teeth that are hard, sharp-cutting, quick-grinding, and the proper size. Stonemo hard granite grit is scientifically processed to give your birds *extra grinding surfaces.*

With each contraction of the gizzard, Stonemo Granite Grit rips open the tough hard film which encases the various nutrients of the finest mash. Stonemo also grinds fine the coarse scratch grains, making them more digestible, better used to produce more eggs.

In the latest work of Iowa State College, up to 10% more eggs were produced from the same feed when Stonemo was offered free choice, and with better feed conversion.

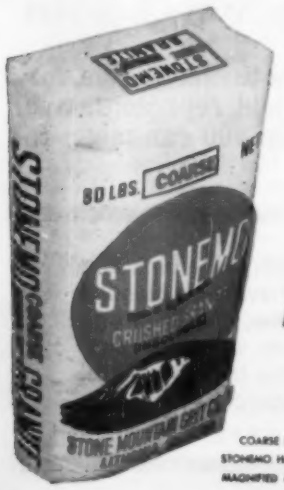
So, sell the importance of gizzard grinding with every lot of feed. Sell the right size Stonemo and watch your customers' poultry profits grow.

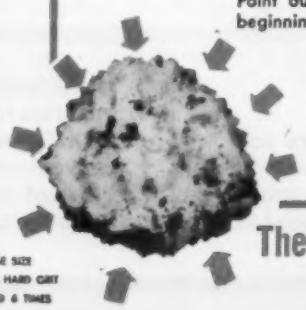
SELL GIZZARD GRINDING
and Extra Meat from Your Feed

If you have broiler customers who are having a hard time making a profit, here is a tip you and they will appreciate. In a series of feeding tests at our research farm, even when an all-mash diet was used, broilers were heavier, feed conversion was better, profits increased nearly ½ cent per pound against no grit—$16.85 per thousand birds.

Sell Gizzard Grinding, and your customers will find:

- **Birds will rid their gizzards of litter, fiber and feathers—make room for more meat-producing feed.**
- **Less feed will be used to produce a pound of meat, even on an all-mash feeding program.**
- **Birds get to market quicker—your customers start the next lot of broilers earlier—save time and money.**





COARSE SIZE STONEMO HARD GRIT MAGNIFIED 6 TIMES

Make STONEMO your Assistant Salesman

Whenever you sell feed for pullets or broilers, sell Stonemo with it, and make feed do a better job. Point out how changing to larger size Stonemo—Medium beginning the fourth week, Coarse beginning the seventh week—will increase feed efficiency and step up profits.

For further research facts about Stonemo, proper feeding directions, and sales aids including posters, newspaper mats, radio scripts, and the popular hit record "Sing Chicken Sing," write:

STONE MOUNTAIN GRIT COMPANY, INC.
Lithonia, Georgia

The Grit with the "EXTRA GRINDING SURFACES"

FROM ONE DEPENDABLE SOURCE

Sta-Kleen Nesting Material

SELL Sta-Kleen

Sta-Kleen Nesting Material is a natural to sell. Clean nests are so badly needed by poultrymen that Sta-Kleen almost sells itself.

Think of being able to tell your customers they can reduce the number of dirty eggs up to 80%.

Think of the sales appeal to a farmer's wife when you say that Sta-Kleen saves the chore of washing or cleaning eggs.

Think of selling the extra profit angle of marketing top-quality eggs—eggs with the bloom still on the shells.

But that's not all. You can also sell less egg breakage, less cracked shells, less unmarketable eggs, for Sta-Kleen is soft, resilient, and cushions the eggs.

Just as important as the right egg-laying environment is Sta-Kleen's remarkable ability to repel dirt and absorb moisture. Droppings are quickly dehydrated and easily removed from the nests.

What are Sta-Kleen's Advantages to You as a Dealer?

There are four big reasons for you to stock and sell Sta-Kleen. All four can increase your profits.

1. **Sta-Kleen sales give you a good margin of profit.**
2. **Sta-Kleen is a repeat item that constantly builds your business.**
3. **Sta-Kleen is nationally advertised to help you build volume fast.**
4. **Sta-Kleen is display packaged in 50 lb. multiwall bags. It's easy to buy right along with your Stonemo Granite Grit.**

So, order Sta-Kleen today from your supplier of Stonemo Granite Grit. Write direct for folders, posters, newspaper mats.

STONE MOUNTAIN GRIT COMPANY, INC.
Lithonia, Georgia

Sta-Kleen ... another fine product to increase poultry profits

calves. But because heifer slaughter remained high, the number of replacement heifers is not large. Thus total cow numbers will not be much larger than a year ago. Not until the heifer calves which were held back last fall come into production will the calf crop go up much.

The big supply of fed heifers has been the big factor in maintaining beef supplies during the current build-up phase of the cattle cycle. Thus, we have the most abundant supply of beef at a low spot in the cattle cycle that we've ever had.

Heifer slaughter last year was only 2% below that of 1957. Feeding of heifers has expanded greatly in the last few years. For example, heifer slaughter has doubled since 1952.

Cattle feeding will continue on a large scale through 1959. Sale of cattle feeds should be good business all through the year.

Of course any increase in cattle numbers sets the stage for a future price decline. One is probable again this time—likely sometime during the early 1960's. If the expansion rate in cattle numbers is kept within bounds, the price drop would not be severe. There is hope that such a goal can be gained in view of the moderate rate of expansion in the cattle breeding herds to date and the possibility that strong feeder demand will continue to hold down the available supply of heifers for breeding. Another expansionary boom such as we had in 1950-52 when between 6 and 7 million head of cattle were added to the cattle numbers yearly, would lead to another collapse in cattle prices such as took place in 1953.

On the whole, prices of cattle may not be greatly different in 1959 than in 1958. More fed cattle will be available for slaughter during the first half of the year, however. Thus, late winter and spring fed cattle prices are expected to average lower than in the corresponding months of 1958. There may be periods of price worry this spring. But during the last half of 1959 prices are likely to be equal to or higher than during the corresponding period of 1958.

SHEEP: Sheep production is increasing. If the weather remains favorable in the range countries, it may continue upwards. But no sharp expansion in sheep numbers seems likely. Prices of sheep and lambs will be influenced by the general level of livestock prices. Since the general average of livestock prices is expected to work downward during the next couple of years, some decrease in sheep and lambs can be expected.

Yet potential markets for lamb are promising. So price adjustments could be relatively mild. For 1959, no more than a small drop from 1958 seems probable because of the continued favorable beef outlook.

DAIRY: Supply of milk products in 1959 will be more nearly in balance with consumption in commercial outlets at prevailing support levels than in any of the past six years. However, milk output still will outrun what the market will take at support prices. So the government support program will remain a factor in the dairy outlook during the coming year.

Dairy cattle numbers have been going downward for nearly 15 years —except for a slight upturn in 1953. At the same time production per cow has moved upward.

Further reduction in milk cow numbers is in sight for 1959—and a continued upward trend in the production of milk per cow.

Prices to farmers for manufacturing milk and butterfat are being supported at 75% of parity. Support levels for 1959 probably will be near that of this past year.

POULTRY: The increased number of layers on farms assures a larger monthly egg output in 1959, at least until the middle of 1959. In turn, egg prices are likely to average lower than in 1958. By the last few months of 1959, however, egg prices could equal or perhaps be higher than during late 1958—if, as expected, there is a moderate cutback in the number of chickens raised for laying flocks in 1959.

Turkey prices averaged a shade higher last year than in 1957. The slightly smaller turkey crop was about offset by the larger carryover storage stocks.

With lower feed prices turkey may be up somewhat in 1959—probably around 5%. If the increase in production is no greater than this, prices won't be much different in 1959, however, than in the year just ended.

On the other hand, if turkey hatchings continue to run substantially ahead of a year ago, the 1959 turkey situation will be very difficult. Feed companies dealing with turkey producers will want to keep a close watch on the reports of poult production during the early months of 1959.

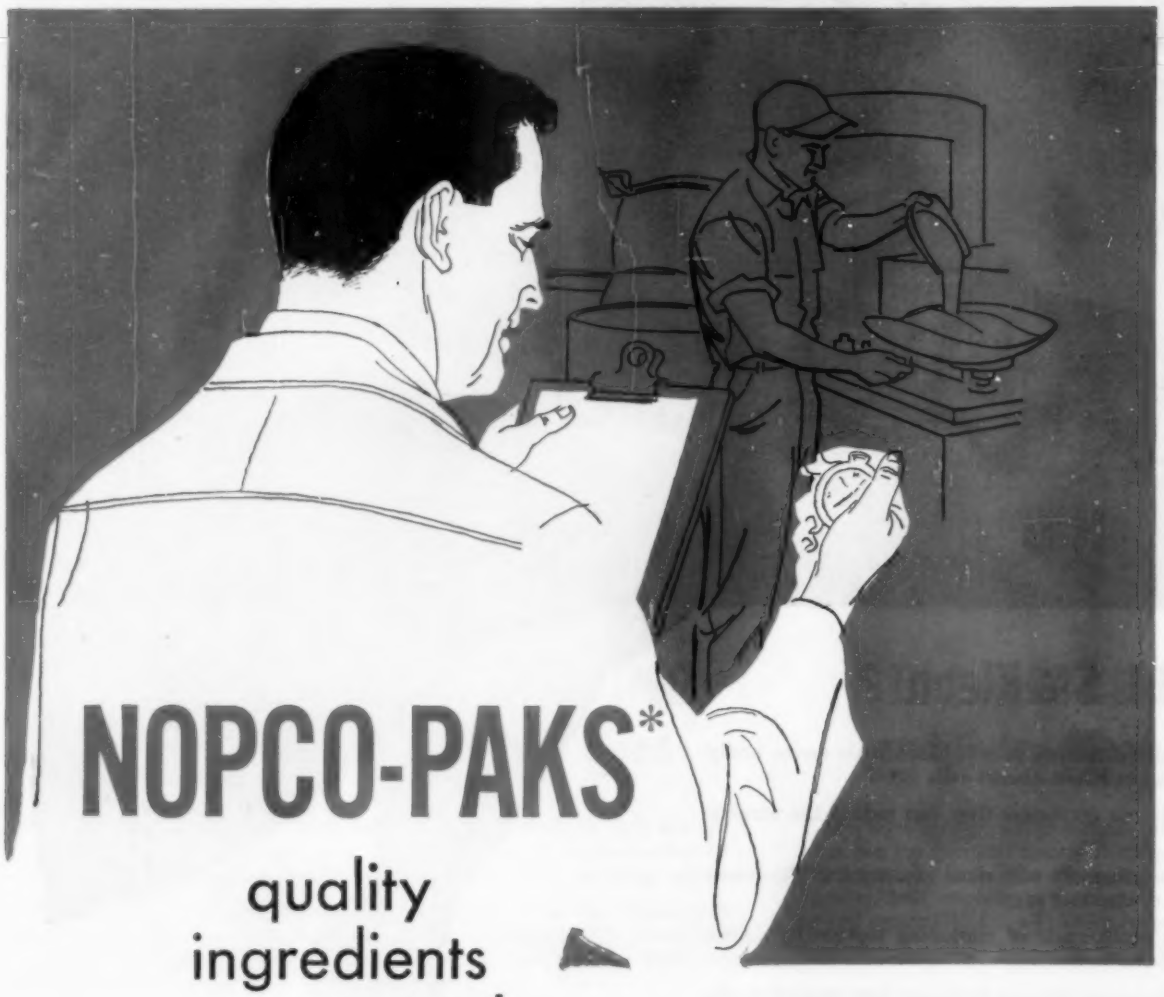
Broilers are one product we seem to produce in greater quantity each year, come what may. And 1959 doesn't appear to be out of the ordinary in this respect. A further rise of 5 to 10% in broiler output seems likely, which is somewhat under the 15% rate of 1958.

Broiler growers can't hope for as favorable prices in the first half of 1959 as during the first six months of 1958. Beef and pork supplies will be more plentiful and prices lower, and broiler output larger. Last winter, broiler marketings were delayed and cut by bad weather and feeding losses. Part of the price decline of the last few years has been offset by increased efficiency, with its lower resulting production costs. Despite this, broiler profits per bird are now below what they were five years ago. They are likely to be even less in 1959, particularly in the first half of the year.

Tote System in Canada

BEATRICE, NEB.—G. N. Johnston Co., Ltd., of London, Toronto and Montreal, have been named exclusive Canadian representatives for the Tote System of bulk material handling equipment, it is announced by Tote System, Inc., of Beatrice.

The account will be handled from Johnston's three offices at London, Ont.; Toronto, Ont., and Montreal, Que.



NOPCO-PAKS*

quality ingredients accurately blended

Nopco-Paks are formulated to give you feed efficiency and blended under the supervision of qualified nutritionists. The mixing operation that has been set up virtually eliminates any chance of human error. The equipment used is of a design and capacity to assure a product of uniformly high quality. Even the length of time that ingredients stay in the mixes is carefully determined so that each batch-sized bag will be an evenly blended premix. These precautions are essential to the production of Nopco-Paks that will provide full potency and assure excellent feed performance.

Blending of Nopco-Paks is done by experts. Why not use Nopco's specially designed facilities to obtain accurate, uniform premixes that deliver the potency you need. Talk to your Nopco representative about your own specially blended Nopco-Pak or write us direct.

**Nopco-Pak is a registered trademark of Nopco Chemical Company*

NOPCO CHEMICAL COMPANY

General Offices: 60 Park Place, Newark, N.J.

Plants: Harrison, N.J. • Peoria, Ill. • Richmond, Calif.

NOPCO

Basic producers of Microtized® Vitamins A and D, niacin, calcium pantothenate, choline chloride, and other products

Calcium Carbonate of Constant High Purity

TRIPLE CCC QUALITY PRODUCTS

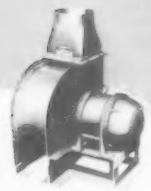
Calcium Carbonate Company

320 South 4th St., Quincy, Illinois
Box 409, Carthage, Missouri
325 W.O.W. Bldg., Omaha, Nebraska

MODERNIZE YOUR MILL WITH KELLY DUPLEX

DEPENDABLE MILL EQUIPMENT

for top service and economy . . . increased profits!



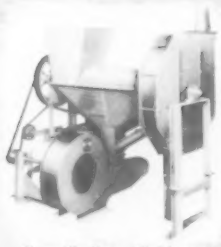
Grain Blower & Exhaust Fan

Vertical Screw Elevator

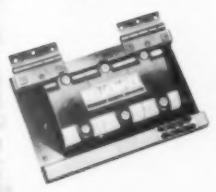
Cob Crusher for making Poultry Litter

Corn Cutter and Grader with Aspirator

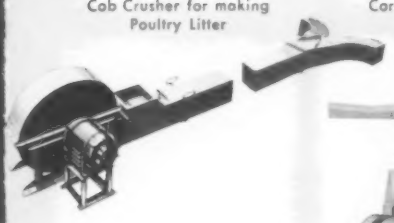
Vertical Feed Mixer ½ to 5 tons and larger



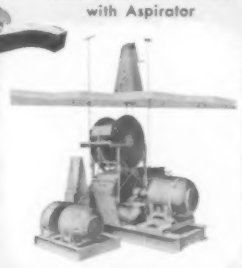
Corn Sheller with blowers for grain and cobs



Magnetic Separator protects mill machinery



Forced Air Carloader with motor or belt drive



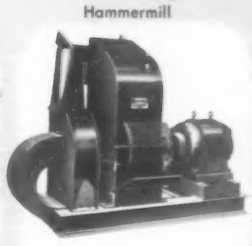
Remote Change Hammermill

Twin Molasses Mixer

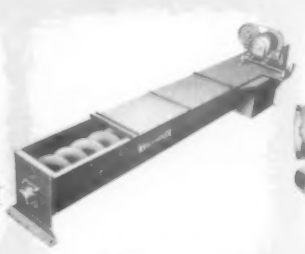
Corn Scalper with or without air cleaner

Chain Drag in double and single geared types

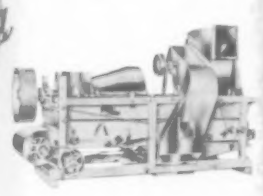
Electric Truck Hoist cuts handling costs



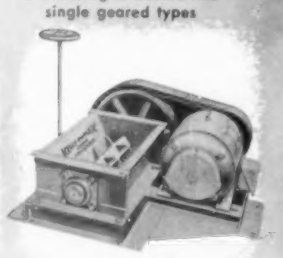
Instant Change Hammermills 12", 16", 20", 24" sizes



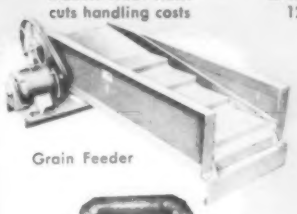
Pit Auger or Ear Corn Conveyor



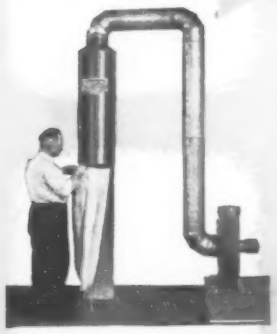
Combined Sheller-Cleaner



Finger Type Corn Crusher and Feed Regulator



Grain Feeder



Electric Bag Cleaner

The Duplex Mill & Manufacturing Company Springfield, Ohio

Yes, I'm interested in the KELLY DUPLEX machinery checked at the right. Please send me full information on these machines without any obligation.

NAME_____

FIRM_____ TEL. NO._____

CITY_____ STATE_____

☐ Information on Free Mill Planning and Layout Service

Mail this Card– No Obligation

KELLY DUPLEX

✓ Check Here!

- ☐ Twin Molasses Mixer
- ☐ Vertical Feed Mixer
- ☐ Instant Change Hammermill
- ☐ Remote Change Hammermill
- ☐ Vertical Screw Elevator
- ☐ Electric Truck Hoist
- ☐ Chain Drag
- ☐ Pit Auger
- ☐ Corn Sheller with Blowers
- ☐ Regular Corn Sheller
- ☐ Pitless Corn Sheller
- ☐ Combined Sheller-Cleaner
- ☐ Gyrating Cleaner
- ☐ Corn Scalper
- ☐ Cob Crusher
- ☐ Corn Cutter and Grader
- ☐ Corn Crusher—Regulator
- ☐ Bucket Elevator
- ☐ Electric Bag Cleaner
- ☐ Forced Air Carloader
- ☐ Magnetic Separator
- ☐ Grain Feeder
- ☐ Grain Blower
- ☐ Complete Line Catalog

KELLY DUPLEX twin Molasses Mixer

The mixing chamber, which consists of 2 rotary shafts and 36 individual paddles, is a model of blending efficiency.

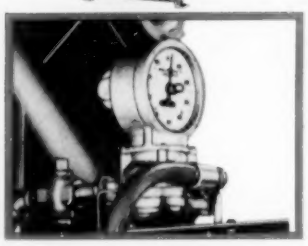
Mixes quickly, evenly, thoroughly without balling or lumping . . . practically eliminates all cleaning!

With a Kelly Duplex Twin Molasses Mixer in your mill, there's big volume and big profits ahead for you in either private brand or custom mixed sweet feeds. Features include a complete, easy-to-adjust control system that lets one man set and maintain the most exacting molasses-feed proportions with absolute accuracy . . . a twin paddle rotor unexcelled for fast, thorough, even mixing—and self-cleaning characteristics . . . a conveyor that swivels to any position or is completely demountable . . . and many, many others.

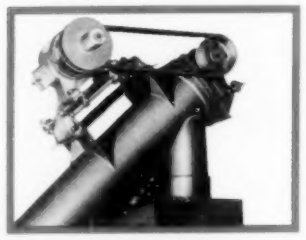
Before you buy, you owe it to yourself to compare this outstanding machine point for point (features, equipment, construction and cost) with all other makes . . . and see for yourself why a Kelly Duplex is your one best buy. The card will bring you full details.

Make your own "point for point" comparison!

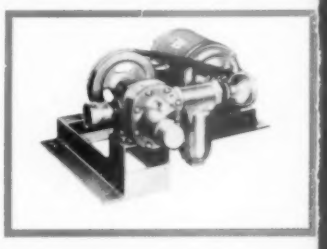
Mail card today for full details



Molasses Meter records in pounds, gives unexcelled accuracy, has turnback attachment. 3-way valve (at left) can be conveniently hooked up for retail bulk molasses sales.



Variable Speed Control on the 1 H.P. screw conveyor gives you positive, finger-tip control of feed flow into the mixer. Conveyor can be removed from mixer and used elsewhere, if so desired.



Molasses Pump is powered by 5 H.P. motor. Special strainer removes foreign matter before it can enter pump. Adjustable by-pass valve eliminates need for return pipe to molasses supply.

FIRST CLASS
PERMIT NO. 72
SPRINGFIELD, OHIO

VIA AIR MAIL

BUSINESS REPLY CARD
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

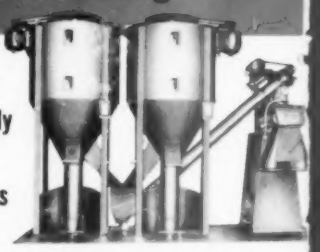
POSTAGE WILL BE PAID BY

THE DUPLEX MILL & MFG. CO.

SPRINGFIELD, OHIO

Continuous Sweet Feed Mixing

A "Twin" and two Kelly Duplex Feed Mixers



. . . give you fast, economical production greater profits

While the batch from one feed mixer is being processed in the "Twin," the second mixer is preparing a new batch. Operation is fast . . . continuous . . . profitable. Vertical feed mixers are available in 6 sizes—½ to 5 ton—to meet your needs.

Iowa Feed Company Pellets Grain Sorghum Into Complete Feed

MARSHALLTOWN, IOWA — The combination of acreage allotments on corn and the problems of harvesting field-dried grain sorghum has resulted in a sizable "side-line" business for the Young Feed Store at Marshalltown—pelleting the sorghum direct from the combine into a complete livestock feed.

The corn acreage allotments resulted in impressive quantities of grain sorghum being grown in the Marshalltown area. Most of it has had to be combined at a moisture content too high for safe storage. When the sorghum is ground and pelleted with protein and alfalfa, the storage problem is solved without the cost of artificial drying.

Co-owners of the Young Feed Store, Harris Young and Bill Baltisberger, have operated a full eight-hour shift this fall just pelleting grain sorghum, and said there is enough business to keep the plant running around the clock, but that they have to use the plant the other 16 hours to handle their regular feed business.

Mr. Baltisberger said that when the moisture content of the sorghum is down around 18% they mix 1,600 lb. of grain, 300 lb. of 40% protein supplement and 100 lb. alfalfa per ton of pellets. When the grain is 20-21% moisture, they mix 1,500 lb. grain, 300 lb. protein and 200 lb. alfalfa per ton of pellets. The alfalfa is instrumental in bringing down the moisture content of the pellets. The ¼-in. pellets are made without steam or water in a California mill, and contain about 13.5-14% moisture.

The Young firm charges $1.60 a ton for grinding, $2 a ton for mixing and $4 a ton for pelleting. With the cost of protein, the pellets cost the farmer about $23-25 a ton. All pellets are handled in bulk.

The pellets are made for cattle feed—extensive cattle feeding is carried on in the Marshalltown area—and for pig starter, grower and finisher feeds. For some of the cattle feed, 100 lb. molasses per ton is added to the pellet mixture.

Mr. Baltisberger said they have pelleted about 350 tons this season, at a gross income of about $11-12 a ton. About 47 tons were pelleted for one customer.

Referring to the keeping quality of the pellets, Mr. Baltisberger said that the J. H. Wake Feed Mill at Oskaloosa, Iowa, started pelleting grain sorghum two years ago, and that some of the pellets produced the first year are still in good condition.

The Young Feed Store handles about 2,500-3,000 tons of protein a year in connection with milling feed under the grain bank plan, and also produces about 2,500-3,000 tons of its own feed, sold under the brand name Hawkeye Feed.

Poultry Conference Planned in Ontario

GUELPH, ONTARIO—"The Poultry Industry—1959" will be the theme of a three-day conference to be held at the Ontario Agricultural College, Guelph, Jan. 20-22.

The conference has been designed primarily for service personnel, specialized producers and others interested in the latest developments of the Ontario poultry industry.

The program calls for hatchery and supply flock day on Jan. 20; equipment, management and disease control discussions on Jan. 21, and poultry feeding methods and poultry nutrition discussions on Jan. 22.

No tuition fee will be charged, and board and lodging will be available in Guelph. More information about the program may be obtained from the Department of Poultry Husbandry, Ontario Agricultural College, Guelph.

DEHYDRATED
and
SUN-CURED
ALFALFA MEAL
Pellets • Crumbles
Bagged • Bulk
THE A. B. CAPLE CO.
Toledo 5, Ohio

SNOW WHITE
OYSTER SHELL
• Steady Profits
• Highest Quality
• Best Service
White Shell
CORPORATION
Jacksonville, Florida
Distributed by
EDWARD R. BACON GRAIN CO.
177 Milk St. Boston 9, Mass.

put your confidence in
PETER HAND VITAMIN A
consistently superior performance
under varying conditions

Peter Hand

Claims and counter claims by suppliers of Vitamin A do not make a superior product. What your customers expect of the Vitamin A in your feeds is that it will be readily assimilated by their animals...and that the vitamin potency will be retained during storage, under varying heat, humidity and mineral conditions.

availability: *Continuing research proves that no real difference can be said to exist in the availability of major, commercially accepted Vitamin A Products. However, Peter Hand Vitamin A is above the average line of response more often than any other. (Test #A1-58C)* The important difference in Vitamin A products is in their stability.*

stability: *Exhaustive tests under varying conditions prove the consistently superior stability of Peter Hand Vitamin A...*

- In PELLETED FEEDS (Test #L-53-54-2)*
- In MASHES (Test #L-53-54-1)*
- In VITAMIN PREMIXES (Test #A-4-54)*
- In MINERAL BLENDS (Test #L-54-40)*
- In WATER (Test #L-54-37)*

PETER HAND VITAMIN A in beadlet form is available in a wide variety of potencies, from 5,000 U.S.P. units to 250,000 U.S.P. units per gram.

PETER HAND FOUNDATION
Division of Peter Hand Brewery Co.
1000 North Avenue, Chicago 22, Illinois

also superior quality custom premixes blended to your exacting specifications

© 1958 P. H. B. Co.

*For complete details and information on results and conditions of testing please mail this coupon.

Peter Hand Foundation, Dept. F-12-27
1000 North Ave., Chicago 22, Illinois
Please send me complete testing details, plus full data and recommended usage on Peter Hand Vitamin A.

Name_____Title_____
Company Name_____
Address_____
City_____Zone____State_____

OUTLOOK

TRENDS IN FEED PRODUCTION

"The time is overdue for a searching review of the feed industry's past performance and its future commitments. . . . The feed miller must plan his future feed production to provide the 'lowest cost' feeds at the point of production; the lowest cost feeds at destination and, finally, the lowest cost feeds in conversion."

By Fred W. Hoover, Jr.
Albers Milling Co.

Fred W. Hoover, Jr.

AUTHOR—Fred W. Hoover, Jr., is president of the Albers Milling Co., Los Angeles, and a member of the board of directors of the American Feed Manufacturers Assn. Mr. Hoover, at 40, is one of the younger presidents of a major milling company. He started with Albers in 1938 as a plant foreman. In succession he became plant superintendent, general production manager, executive vice president and president. He is also a director of the Carnation Co. Mr. Hoover is a graduate of the University of California, has attended the University of Washington, and took graduate work at Harvard University. With his background in feed production as well as management, he is particularly well qualified to comment on developments relating to production.

Over the past decade, major improvements in production and distribution methods have been made within the U.S. feed industry. Only a few years ago a production manager thought he was doing an outstanding job if he could produce a ton of feed with the expenditure of 1½ man hours. Today some mills are producing feeds at the rate of one ton per ½ man hour or less. This increase in productivity has largely offset wage rate increases during the past decade. To attain this improvement in productivity, however, millions of dollars have been expended in capital investment by the industry.

But of equal importance to the efficiency and profits of mill operations is the rapidly improving efficiency of the farmer, who is also a manufacturer of meat, milk or eggs. The growth of mill efficiency must be coupled with feeder efficiency if our industry is to meet the staggering population growth rates predicted in the next 10 years. One and one-half man hours of labor per year per hen were required five years ago. Today's efficient poultryman takes only three fourths of an hour or less per bird per year. The manufacturer of feed has done much to reduce these labor costs for the farmer, but he must do more.

Searching Review Needed

As each new year begins, it is customary to reflect on the past year and make some good resolutions for the year ahead. This seems particularly appropriate for the people directing over 4,000 U.S. feed mills. In today's highly competitive market, the feed miller is faced with problems of integration; rapid obsolescence of plant facilities due to improved mechanical technology; quick shifts in poultry and livestock populations; overproduction and a surplus of feed milling facilities in many areas of the country. The time is overdue for a searching review of the feed industry's past performance and its future commitments.

The feed miller must ask himself what he will contribute to the future scheme of producing meat, eggs and milk.

Contract farming and other forms of vertical integration are among the most potent forces in agriculture today. Vertical integration has grown out of improvements in technology and industrialization that brought vast consumer markets. These developments have brought about great changes in the way farm products have been produced and distributed. In a sense, the farmer, too, is a factory manager producing meat, milk and eggs by factory efficiency methods if he is to survive.

Lowest Cost Feeds

If the feed miller is to survive in the new scheme of things, he needs to keep the total cost of producing feed products to the absolute minimum, and he must also advise the farmer on feeding programs and markets.

It will be necessary for the feed miller to improve his "information technology" and sell feeding methods as well as feeds. He must have all of the facts readily available when it comes to making decisions that will affect his own and the farmer's economic future. "Total economics" of production and distribution of the products of feeding will become more important in the years ahead. Therefore, the feed miller must plan his future feed production to provide the "lowest cost" feeds at the point of production; the lowest cost feeds at destination, and finally, the lowest cost feeds in conversion. It will be equally important that the point of production in relationship to the point of use be taken into consideration in the "total economics."

"Information technology" will have a definite and far-reaching impact on the managerial organization. The formulation department (nutrition) will undergo extensive changes. Present indications are that sizeable savings can be made in manufacturing and feeding efficiency by employing electronic processing equipment to formulate feeds—assuring fast, efficient and accurate use of all the feeding research data that is available. Important research data can be converted to practical feed formulas months sooner than had been possible.

The high speed computer applies mathematical methods to decision-making problems of formula costs, transportation, financing and labor costs. Feed millers will employ this new technique of mathematical programming to speed information to management for decision making. The words "least cost formula" will be added to the common dictionary of the feed miller.

Information technology will have its greatest impact by moving the spheres of planning, research and performance closer together.

Complicated Problems

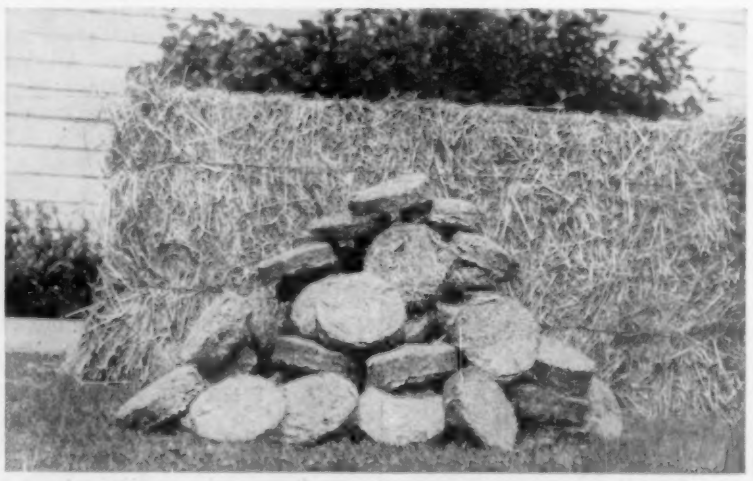
The years ahead will present many complicated problems. As an example: The machinery manufacturers will present new equipment which will tempt mill management to replace present facilities. In evaluating new investment projects management must have accurate information on the effect of the new equipment on the total economics of production. The capital requirements of vertical integration will make it increasingly necessary to evaluate research projects and plan equipment investment as to its contribution to the mill's profits and the farmer's profits.

Accurate analysis of the facts might indicate that it is better to employ the company's available funds to increase research or modernize production facilities, thereby reducing costs instead of employing the funds for financing of feed sales or in projects of vertical integration which could adversely affect the farmer's profits, or worse, his future in the community. Perhaps the feed miller who offers the farmer feeds with a larger dollar return per ton fed will retain and gain more business.

Decentralization to Continue

Cost studies have shown that the feed mill producing approximately 25,000 tons of **bulk** feed per year can be operated at as low cost per ton as the larger plant producing from 50,000 to 100,000 tons per year. With the increasing costs of delivering feeds (particularly bulk) from mill to feeder, mill location in relationship to the area it serves has become increasingly important. The trend toward decentralization of milling facilities will continue. The strategically located mill will have a decided advantage provided the miller equips himself with modern research proven formulation and has aggressive management that will employ marketing

A major future development for the feed industry lies in the processing of forage crops for dairy and beef cattle, according to the author of the accompanying article. This Sumner Foragizer (portable unit) is used to make alfalfa "Hayfers," which eliminate several hay handling chores from field to feeder. Grains and concentrates can be combined with the hay. The wafers are "pumped" out of the "barrels" on the left side of the unit. Production with alfalfa is 6 tons per hour. When grains and concentrates are added, output is 10 tons per hour.



These "Hayfers" are said to reduce volume by 80% compared with baled hay. The wafers are 5 in. in diameter.

and sales assistance to his dealers and feeders.

There were many important developments in the feed industry during 1958. The most talked-about subject undoubtedly was contract farming and vertical integration. This appears to be the biggest problem facing the feed industry during 1959 and the immediate years ahead. In the long run the miller and the farmer must work these programs together on an equal endeavor if they are to succeed.

The feed miller must constantly keep uppermost in mind the questions: "What worthwhile service do I perform? Am I producing a profitable feeding program as well as a feed? Are my services stop-gap measures to grab quick tonnage or are they long-range contributions to agriculture?" Unless the feed miller is able to come up with affirmative answers to these questions, he will not be included in the farmer's plans of production of meat, eggs and milk.

Handling Forage Crops

While the year ahead presents many serious problems, it also presents many opportunities. 1958 saw much progress made in the pelleting of hay and other forage crops. In the year ahead it is quite likely that major developments will be made in the mechanization of harvesting, storage and feeding of forage crops. It is altogether possible that forage crops will be added to the list of common ingredients of the feed industry. Roughage is the basic feed of the meat and milk producing farmer. Unlocking the nutritive values of roughage, cutting the costs of roughage production is the great future of agriculture.

Approximately 25% of the total cost of alfalfa hay and other similar forages is in labor of harvesting and transporting from the place where grown to the place where fed. The development of equipment that will pellet or wafer chopped hay offers vastly expanded tonnage to the feed miller. Machines such as the Sumner Foragizer have already proved that it is possible to cut five hay handling chores from field to feeder, reduce trucking costs and deliver a feed of improved nutritional value in a labor saving form. During the coming year feeding research results may establish that it is economically sound to feed dairy cows a complete ration in wafer or "Hayfer" form.

At present dairymen have no way of knowing the protein TDN or energy value of the hay being fed to their cows. As a result it is not possible for them to balance the hay with the proper grain ration for lowest cost milk production. The feed miller with his knowledge of ingredient analysis will be able to provide the dairyman with a guaranteed analysis of his complete hay-grain wafers. This ration will be furnished to him in bulk and delivered into a self-feeder bunker that will hold a supply adequate for a week.

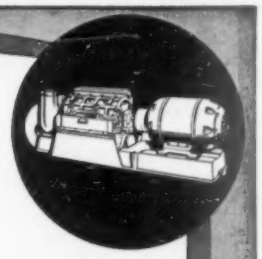
In areas where hay is transported long distances, it is quite likely that hay wafers will supplant baled hay within the next few years. Where hay is produced close to feed lots, machines such as the Foragizer can convert chopped hay to a complete feed with grains and concentrates in the "Hayfer" and do it all right in the field.

Feeding trials have already indicated that the pelleting or wafering of fattening rations for beef cattle is economically sound. The feeding of forage crops, grains and concentrates together in wafered form has resulted in increased feed efficiency. One report has indicated 4 lb. daily gains with "Hayfer" feeding at greatly reduced labor costs. Further feeding trials are needed to prove out the total economics of wafering fattening rations.

Opens New Avenues

The potential of roughages in wafer form opens whole new avenues for expanded feed tonnage. Byproducts of the sugar cane and pineapple industries in Hawaii, for example, have long been burned as useless waste. Today researchers are on the threshold of converting cane strippings and pineapple waste into wafered feed products of good potential.

Aggressive research on the part of feed millers is a must. But before this must come a genuine desire to serve agriculture better. A moment's pause here at the beginning of 1959—an evaluation of our goals plus a sincere desire to see that those goals are akin to the best interests of agriculture can make '59 the best year yet.



HAMMERMILLS, FEEDERS,
MIXERS, MAGNETIC
SEPARATORS, ETC.

Jacobson
MACHINE
WORKS

Serving the feed industry for 47 continuous years. Ask your Jacobson representative.

1090 TENTH AVE. S.E. Dept. M
MINNEAPOLIS 14, MINN.

Whitmoyer

CARB-O-SEP
is safe — even for BREEDERS

"83% HATCHABILITY..."

reports one turkeyman who says:

"During the past two seasons we have used CARB-O-SEP for blackhead prevention in our growing stock as well as our breeders with excellent results. Losses from blackhead were practically zero. Egg production, fertility and hatchability were the best we have experienced in recent years. Hatches ran as high as 83% of all eggs set.

"CARB-O-SEP has enabled us to produce healthier birds at lower costs. We can recommend it to anyone interested in better profits." Reports from other breeders have been equally enthusiastic.

PUT CARB-O-SEP IN YOUR BREEDER MASH— AS WELL AS YOUR GROWER MASH

Here's one blackhead preventive that's safe enough to use to prevent costly outbreaks in valuable breeding birds.

Mix 2 pounds CARB-O-SEP in each ton of your regular turkey breeder mash. This mash should be fed throughout the laying and breeding period. It's another profitable way to serve your turkey feed customers.

For complete data on CARB-O-SEP, write Box FS-12

Whitmoyer LABORATORIES INC.
Manufacturing Chemists
MYERSTOWN, PENNA., U. S. A.
"Products of Scientific Merit"

IN CANADA: WHITMOYER LABORATORIES, LTD., PORT CREDIT (TORONTO TWP.), ONTARIO, CANADA

• FOR MEAT BIRDS • FOR BREEDERS
CARB-O-SEP
Patent Pending
prevents blackhead

top protection —yet safe enough for BREEDERS

CONSULTANTS
TO THE
FEED INDUSTRY
C. W. SIEVERT and ASSOCIATES
Room 1339
221 N. LaSalle St. Chicago 1, Ill.

Use Feedstuffs WANT ADS for RESULTS

Sheep Replace Bovines For Digestion Trials

UNIVERSITY PARK, PA. — Sheep are being compared with dairy cows and steers at four Northeast agricultural experiment stations to investigate the possibility of replacing bovine animals with sheep in digestion trials.

Present data would indicate that digestible energy and digestible protein of forages may be determined by using sheep just as well as by using dairy cows or steers, according to Science for the Farmer, publication of the Pennsylvania State University Agricultural Experiment Station.

"If this premise is confirmed," the publication said, "carrying out digestion trials in the evaluation of new and improved forage crops will be made much easier."

The report was written by Dr. J. W. Bratzler, animal nutritionist, who said the shift in species of test animal may well become part of the shift from the use of total digestible nutrients (TDN) to digestible energy and digestible protein values in the common evaluation of feeds. Digestible protein and digestible energy are extremely reliable measures of the nutritive values of forages, he said.

The nutritive values of 24 forages are being determined in a cooperative study by the agricultural experiment stations at Maryland, Massachusetts, New Hampshire, and Pennsylvania. Sheep are being used as the test animals at Pennsylvania while milking cows and steers are being used at the others.

Dr. Bratzler said the use of sheep in evaluation of forages will make possible the use of larger numbers of experimental animals and the use of considerably smaller quantities of the forage being evaluated. Standardization of the methods involved in the evaluation of forages is certain to increase their reliability and acceptability, Dr. Bratzler said.

Grain Marketing Forum Scheduled in Illinois

URBANA, ILL. — Special sessions for those interested in grain marketing will be part of the University of Illinois Agricultural Industries Forum Jan. 27-28. Developed by a joint committee of university agricultural economists and industry representatives, the grain marketing program will deal with the general subject of "The Future of Terminal Grain Markets."

During the Jan. 27 afternoon session, Walter M. Goldschmidt, assistant vice president of the Continental Grain Co., Chicago, will discuss "The Changing Flow of Grain to and Through Chicago." C. M. Roberts, regional manager of Cargill, Inc., St. Louis, will speak on "The St. Louis Grain Gateway." Dr. C. P. Schumaier, University of Illinois agricultural economist, will report on "Changes in Downstate Illinois Grain Flow."

The second half of the afternoon session on the first day will center on futures trading. Robert C. Liebenow, president of the Chicago Board of Trade, will discuss "The Decreasing Volume of Trading"; W. E. Huge, vice president, Central Soya Co., Inc., Ft. Wayne, Ind., will talk on "Changes in the Use and Usefulness of Futures for Hedging," and Robert L. Raclin, partner of Bache & Co., Chicago, will comment on "The Problem of Maintaining Speculative Volume."

On the morning of Jan. 28, Dr. T. A. Hieronymus, University of Illinois agricultural marketing specialist, will speak on "Changes Needed in Futures Contracts." The remainder of this session will be devoted to an open discussion of the future of terminal grain markets. All speakers will serve as a panel to answer questions from the audience.

Other subjects also will be discussed during the Agricultural Industries Forum.

Complete details and reservation forms may be obtained from Dr. H. G. Halcrow, head of the department of agricultural economics, University of Illinois, Urbana, Ill.

NEW OCCUPATION: "COW SITTER"

EAST LANSING, MICH.—There is a need for "cow sitters" in Michigan and other states, Donald L. Murray, extension dairy specialist at Michigan State University, believes. The need is so great, he said, that a "cow sitter" profession could be a profitable operation in any state where most dairy farms are a one-man operation. Mr. Murray said he talked to one dairyman recently who said he hadn't missed a milking for 12 years and would like to arrange for an occasional weekend off or a week's vacation. An experienced cow man could do a satisfactory job and could develop a sizeable clientele, Mr. Murray said.

NEW MANAGER

OROFINO, IDAHO — Bud Samsel has assumed management of the Orofino Grain & Feed Co. He was formerly engaged in the fertilizer business for 11 years in Craigmont, Idaho. Former manager was Perome Peer.

Your protection assured by our laboratory control

Lime Crest TRADE MARK BRAND

Rigid laboratory control is not just a hobby! Nor is it a luxury. It is an absolute necessity for the feed manufacturer who wants to be certain that his feeds contain what his nutritionist says they should contain.

Lime Crest trace-mineral pre-mixes are made under rigid laboratory control. You can use them with full assurance that they will always put into your feeds what they are supposed to put there. *You* are protected by *our* laboratory control . . . and our research.

LIME CREST TRACE-MINERAL PRE-MIXES

Made by LIMESTONE PRODUCTS CORPORATION OF AMERICA, NEWTON, NEW JERSEY

World's Largest Producer of Crystalline Calcite Products

CANADIAN DISTRIBUTOR: The Ash Chemical Co., 353 St. Nicholas St., Montreal 1, P. Q.

Serving Mills & Breeders For Over 30 Years

DEVOLD

Devolked ® Vitamin Oils (Fortified Cod Liver Oils)
Devolked ® Non-Dest. Cod Liver Oil U.S.P.
Devold Vitamin A & D Feeding Oils
Devold Vitamin A Oils
Peder Devold Wheat Germ Oil

"Stabilized" From Can to Carloads
OREgon 9-8400

PEDER DEVOLD OIL CO.
DIV. CLINTBROOK CHEMICAL CO., INC.
417-FM Fifth Avenue
New York 16, N.Y.
Plant: Lyndhurst, N. J.

Manufacturers and Suppliers of

EXPELLERS
SOLVENT EXTRACTION EQUIPMENT
DRYERS • FLAKERS
GRAIN EXPANDING EXPELLERS
MATERIAL HANDLING EQUIPMENT

Write for information and prices

The V. D. ANDERSON COMPANY

Division of International Basic Economy Corporation
1900 West 96th Street, Cleveland 2, Ohio

Chicks to Fryers QUICKER

Seagram Solubles are a dynamic feed supplement which supply important, vital, growth factors to all classes of poultry. The Grain Fermentation Factors present in Seagram Solubles are one of the chief reasons why they produce such quick, efficient results. Seagram Solubles are low in moisture and fiber, high in fat and energy and contain all of the important B-vitamins so necessary to speedy, healthy growth.

Give your poultry customers the best — fortify your poultry rations with high powered Seagram Solubles!

JOS. E. SEAGRAM & SONS, INC.
Louisville, Kentucky
GRAIN PRODUCTS DIVISION

Seagram SERVICE TO AGRICULTURE

OUTLOOK

The Importance of

Improved Feed Sales and Service

in a Changing Market

By I. S. Riggs
The Quaker Oats Co.

Isaac S. Riggs

AUTHOR — Isaac S. Riggs is vice president of the Quaker Oats Co. feed department, Chicago, and chairman of the board of the American Feed Manufacturers Assn. A native of Iowa, Mr. Riggs graduated from Iowa State College in 1923 with a B.S. degree in agricultural economics. He joined Quaker Oats in 1923, and one of his earliest jobs was as clerical assistant to the late Dr. O. B. Kent, noted poultry nutritionist. In 1932, the company's feed and cereal sales departments were consolidated. Mr. Riggs became a jobbing salesman, selling feed and cereals to wholesale grocers and feed dealers. In 1936 he was named manager of the Peoria, Ill., sales office, and three years later became manager of the Richmond, Va., sales office. In 1941 he was appointed eastern division sales manager, with headquarters in Chicago, as well as assistant sales manager for the entire company. He became sales manager a year later. In 1949, several years after the cereal and feed departments had again been separated, he was appointed manager of the feed department, and in 1953, was named vice president. Mr. Riggs was elected AFMA chairman in May, 1958.

The feed man has his work cut out for him in serving a changing agriculture. Here are some suggestions and comments on such things as:

- **Bulk feed**
- **Financing help**
- **Complete feeds**
- **Marketing aids**
- **Technical improvements**

If we haven't already done so, 1959 isn't too early to take a good look at the changing farm market.

The major demand for feed in the future will come from fewer, larger, and more specialized farm enterprises.

The number of farms is declining; the size of farm units is increasing; farmers are becoming more specialized. This is the story pouring forth from the data provided by the Census of U.S. Agriculture. These trends indicate future developments in the feed industry and certainly some of the services that will be required of feed dealers all over the country.

While total farms declined by 600,000 between the 1949 and 1954 Censuses of Agriculture, the larger units —with annual sales of $10,000 or more —actually increased by 90,000. Census data further adds to this story. (Figure 1):

- In 1920, 4,851,000 U.S. farms reported hogs. By 1940, the number was down to 3,767,000, and in 1954, only 2,361,000 farms were raising hogs. A reduction of 51% in farms raising hogs occurred in 34 years. At the same time, the quantity of pork produced increased 32%.
- Cattle were reported on 5,358 000 farms and ranches in 1920, and 3,651,000 in 1954. Thus, a reduction of 32% occurred in the number of farms, while cattle numbers increased 36% and the output of beef has more than doubled.
- Chickens were reported on 5,837,000 farms in 1920, and 3,418,000 farms in 1954. While a reduction of 42% occurred in the number of farms reporting chickens, the output of eggs increased 97% and chicken meat production increased 93%.

Another chart (Figure 2) shows the relative importance of these large farms in the total output picture. While the large farms make up only 15% of the total number of farms, they account for 89% of all farm product sales.

Efficiency has been stepped up to a point where 35% fewer farm workers are now producing 60% more farm products than they did 30 years ago. The output per man-hour of farm labor has about doubled since 1940. This increase in efficiency has resulted both from greater output per acre and per animal, as well as from fewer man-hours of work. In 1956, the production of crops was about ¼ larger than in 1940, whereas the acreage of cropland increased only 2%, and about 40% more livestock was being obtained from only 10% more units of breeding livestock.

It seems plain that only farmers with the knowledge and skilled labor required for specialized production—and the necessary capital resources—will be successful in the future.

A major source of increased productivity has been, and will continue to be, achieved by **purchasing resources.** These purchased resources include feed, fertilizer, and machine power. In buying commercial mixed feeds, the feeder is freed from the tasks of formulating, grinding and mixing of feed and can apply more time to his area of specialization.

Farm specialization in the production of meat, milk and eggs undoubtedly will also require specialization in services by the dealer in one of several phases of production of these items. These services must be improved, be reasonable in cost and fill a real need to attract customers to him.

Bulk Feed

Bulk feed services are a "must" on many large, specialized farms. The fastest and most permanent reduction in feed costs can be made by bulk feed purchases. In some instances the differential between bulk and sacked goods can amount to as much as one quarter of the remaining cost over ingredients. It would take a $10 a ton reduction in soybean meal in a 40% supplement to secure this immediate saving.

Many dealers with grinders and mixers are handling thousands of bags of concentrates a year at least three times before the completed mixture is available to the feed customer. Handling sacked concentrates out

FIGURE 1. Farm numbers decline as farmers specialize. (Source: Census of Agriculture, 1954)

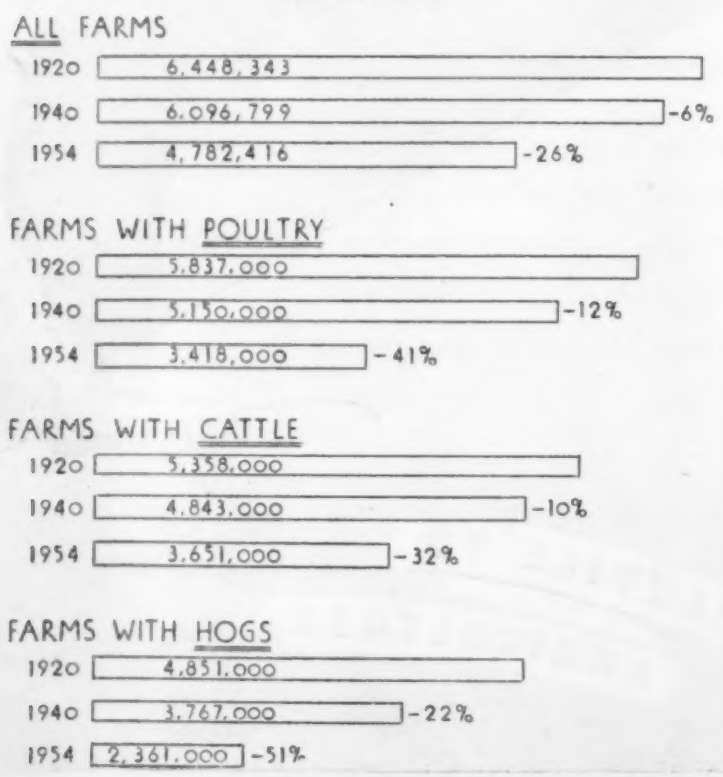
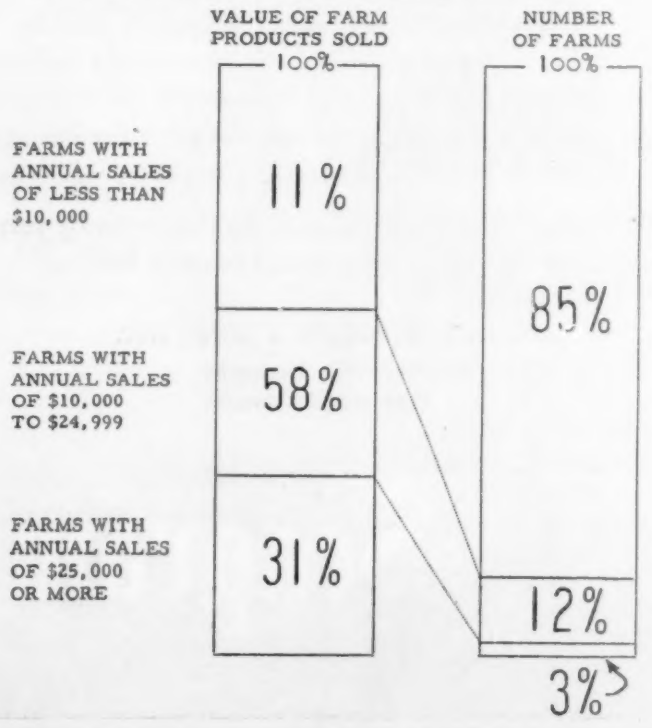


FIGURE 2. Distribution of farms by value of products sold, 1954



of the car into a warehouse, dumping into mixers, and resacking are an expensive operation, generally done by the dealer at far less than his actual costs of providing this service. The six-month savings in buying these concentrates in bulk would often pay for the needed physical improvements at these stations to streamline their handling and mixing operations to utilize bulk feeds.

And, of course, a really economical service to farmer customers would be the service of delivery in bulk trucks.

In addition to bulk feeds, many large, specialized farm production units are now becoming more and more interested in buying another service from their dealers in the form of complete feeds. Such feeds are convenient to handle and free labor for other work, particularly during the critical periods of planting and harvesting. There is a more complete inventory control, more uniform quality, and in many instances more efficient production on the farm through the use of complete feeds.

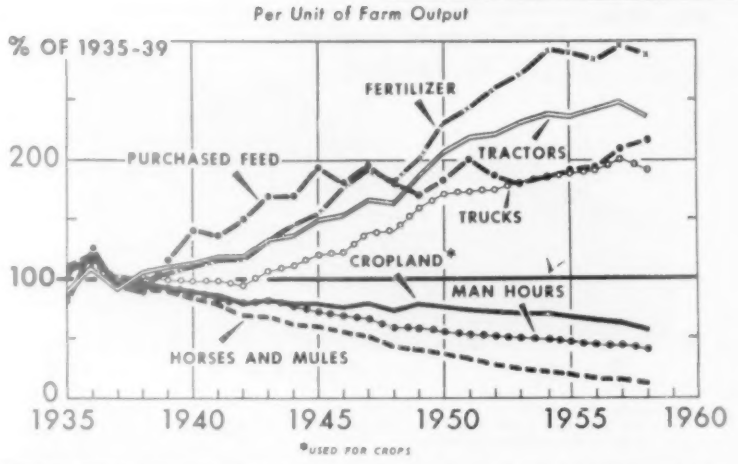
Financing

The specialized, highly capitalized farm producer, often faced with the necessity of expansion, is looking to the feed trade for more and more financing of his production units. Many times he will go to his dealer as the source of this capital and feed credit. A businesslike approach to the evaluating of these monies and their return is needed. Lack of capital many times may prevent the growth of these farm units into an economical size.

Where this is a problem, I would think the independent feed dealer should thoroughly investigate the availability to his customers of rural financing provided not only by banks but by "Uncle Sam." Many co-ops exploit this opportunity, yet there has been a general reluctance on the part of the independent dealers to make full use of such funds. I have no doubt that credit demands for financing meat, milk and eggs will increase; therefore, it would seem to me advisable for every dealer to acquaint himself with, and investigate the local availability of, the services of Federal Land Banks, Farm Home Administration, Production Credit Associations, etc.

Until population growth catches up with the surplus of food products in this country, the feed industry is likely to be called upon often to help pay for advertising campaigns aimed at increasing the consumption of meat, milk and eggs. While this, it seems to me, is not really a function of the feed industry, there are many marketing aids which the feed industry can render producers. In the realm of improving quality of meat, milk and eggs, the feed trade certainly can do a lot by working with producers. And any technical improvements in the manufacturing or mixing of feeds, and in their distribution to the farms, contribute in the long run to improved costs and therefore an improved profit and consumption situation for these end products. All the feed trade should be active and alert to bring new concepts of production and distribution of feeds into practice whenever they contribute to lower costs.

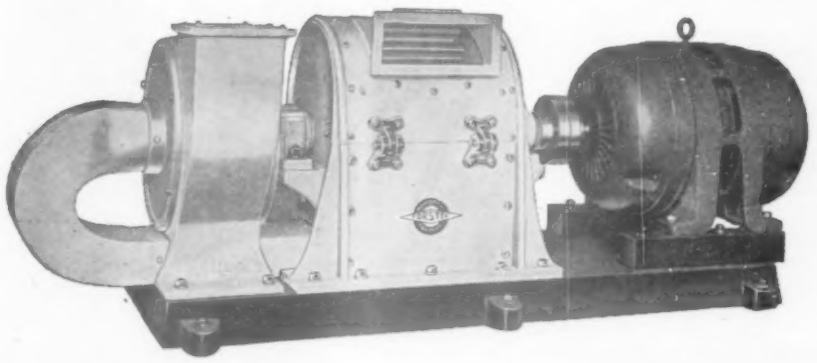
The educational facilities available to the feed industry are simply amazing! College nutrition schools, production schools for manufacturing personnel, banking schools for farm credits, sales training schools, college short courses—all should make the feed industry the best informed people in the agricultural field. Such opportunities are rare in industry. An increasing awareness of the cost-price squeeze on the part of the producers of meat, milk and eggs makes taking advantage of all these educational facilities to improve efficiency nearly a "must" for the feed trade.



PURCHASED INPUTS INCREASE — Farmers' cash costs have gone up greatly in recent years as they purchased more resources for use in production from nonfarm sources, and prices of production goods and services increased. They now use more than twice as much feed, fertilizer, machinery and other purchased materials than they did 20 years ago. The chart indicates, however, that labor input per unit of farm output has decreased by one half and cropland by one third since 1940.

FORSTER HAMMER MILLS

Serve Better . . . Last Longer!

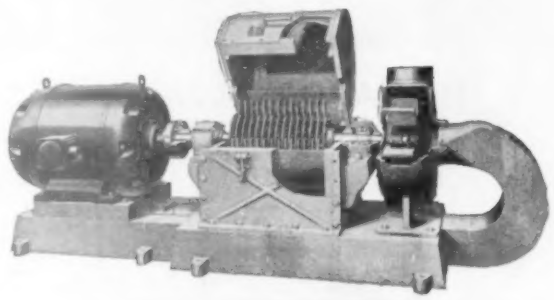


The Aristocrat of the Milling Industry

☆ Heavy construction ☆ Continuous service ☆ Carburized hammers
☆ Extra-large main shaft of alloy ☆ Shock-proofed steel
☆ Vibrationless performance ☆ Cast alloy steel fan

Proved by thousands of installations

Want quality? dependability? low maintenance? Specify a Forster Hammer Mill for your needs. Here's the mill that's proved itself all over the world. Forster Hammer Mills have the precision engineering of a fine watch, with every part machined to give a smooth, vibrationless performance. Forster Mills have the stamina to take the roughest punishment . . . through the years. A true balance of air, screen surface and power to insure lasting efficiency. There's a Forster Hammer Mill that's just the right size to most efficiently serve you. Call or write for information, now.



● Sizes from 15 to 125 H. P.

At Your Service . . . We Fly Our Own Planes

Send for complete details, today

MANUFACTURING FORSTER COMPANY
ADA, OKLA FEderal 2-6020

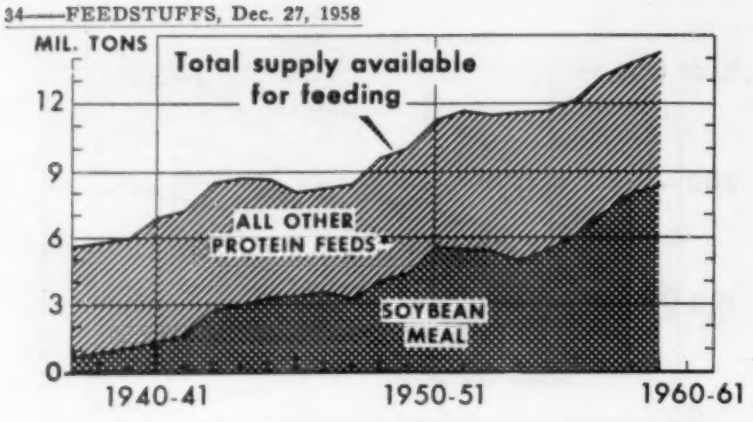
FORSTER MANUFACTURING CO., ADA, OKLA.
Gentlemen:
Please send complete details on Hammer Mills
Name .....
Company Name .....
Address .....
City ..... State.....

CANADIAN OATS
POULTRY • FEED • SEED
MIXED FEED
PROCESSED
ALL GRAINS
& BYPRODUCTS

CANADIAN SCREENINGS
FLAX AND REFUSE
GROUND AND BULK

JAMES RICHARDSON & SONS LIMITED
ESTABLISHED 1857
14th Floor, Royal Bank Bldg.
2 King St., E. TORONTO
Head Office, Winnipeg, Canada

CHECK FEEDSTUFFS WANT ADS!!



YEAR BEGINNING OCTOBER.
*OTHER OILSEED MEALS, ANIMAL, MARINE AND GRAIN PROTEIN FEEDS, IN TERMS OF SOYBEAN MEAL EQUIVALENT.
1958-59 BASED ON SEPTEMBER INDICATIONS.

PROTEIN FEED PRODUCTION INCREASES—Contributing to the abundance of feeds in prospect for coming years is the growing production of high protein feeds, with the rapid rise of soybean production the biggest single contributor. Production of protein feeds has more than doubled in the past 20 years. Soybean meal production alone has had an increase of about 800% in that period. All other protein feeds combined have had about a 50% increase during the same 20 years.

Nebraska Feed Volume Shows Slight Decrease

LINCOLN, NEB.—The tonnage of commercial feeds sold at retail in Nebraska during the year ending June 30, 1958, was down 9% from the same period a year earlier, according to a report from the Nebraska Department of Agriculture.

Tonnage for the 1957-58 year was 665,736.8, compared with 730,111.9 for the earlier reporting period.

During the 1957-58 year, cattle feeds were the biggest sellers with a total of 169,856.4 tons, just a slight lead over the 166,557.7 tons reported for all poultry feeds combined. Beef, dairy and calf feeds combined totaled 200,383.2 tons. Hog feed tonnage was 145,920.3.

Among the other feeds listed, custom mix and feed products totaled 30,769.6, vegetable meals and animal by-products totaled 54,961.7, and alfalfa meal totaled 27,449.9.

Virginia Feeder Cattle Prices Top 1957 Mark, VPI Specialist Notes

WARRENTON, VA.—Feeder cattle sold at higher prices in Virginia this fall, according to K. C. Williamson, beef cattle marketing specialist at Virginia Polytechnic Institute.

Feeder calf prices averaged 37% more than 1957 figures, Mr. Williamson said, and higher prices for yearling cattle were also noted.

A total of 26,276 calves were sold, 1,500 more than last year, with 17,162 steer calves averaging $33.34 cwt., or an increase of $8.63 over last year.

Some 9,114 heifers averaged $28.60 cwt., which was $8.22 more than 1957.

Average price for yearling cattle was $25.77 cwt., or 29% over 1957. Fancy and choice yearlings averaged $26.64, good grades $26.42 and mediums $25.43.

Common yearlings dropped in price to $23.64 and a few inferiors sold for $23.42.

According to Mr. Williamson, "The good season and pasture conditions which prevailed over much of Virginia resulted in heavier calves. Steer calves averaged 580 lb., heifer calves 442 lb. and yearlings 727 lb."

He added that despite the good season, only 32% of all the calves sold were in the top two grades.

The calves were sold to 26 buyers from 15 states, including feedlot operators from Illinois, Minnesota, Ohio and Pennsylvania.

Kansas Firm to Expand Poultry Operations

TOPEKA, KANSAS—Paul C. Barrett has announced he will expand his poultry business at Topeka to include a new processing plant and a broiler production setup.

He said the present plant will be used as a buying station for the firm.

It will be the first time the company has produced its own birds, but it is planned to keep contract growers now supplying poultry.

The goal will be 100,000 chickens on feed. Work on the broiler houses will start the first of the year, and plant construction in the spring. The new plant will be on 35 acres east of the city.

Plans for the future are to go into the turkey growing field and market them in the same way as the broilers. Local stores will be serviced on a daily basis to insure fresh poultry at all times.

The firm was started by William V. Barrett, who was in the business 25 years until he became ill. He is the present operator's father.

FIRE DESTROYS ELEVATOR

HOOKER, OKLA.—Fire recently destroyed the old Security Elevator here along with about 6,000 bu. of newly-harvested milo. It is believed the blaze started in a stalled motor in the head house.

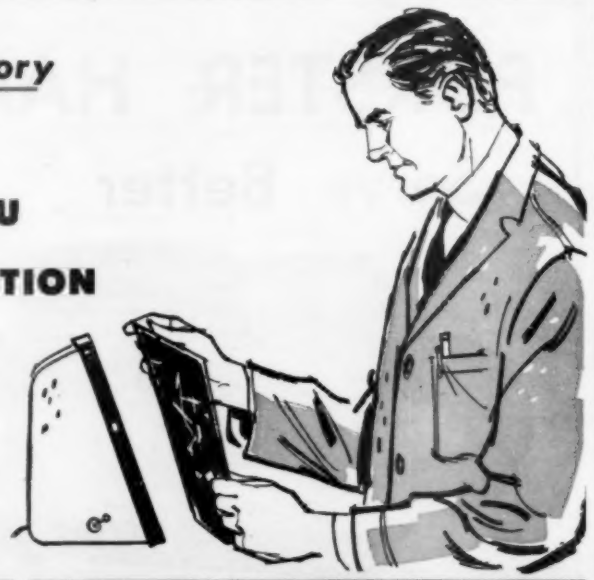
From the research laboratory

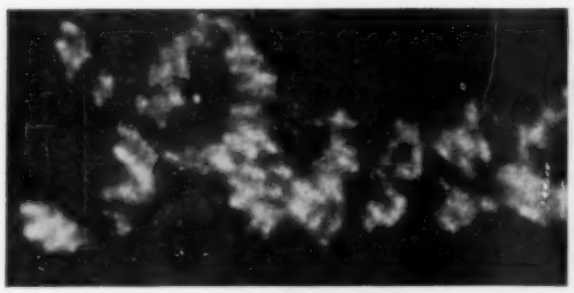
...VISUAL PROOF

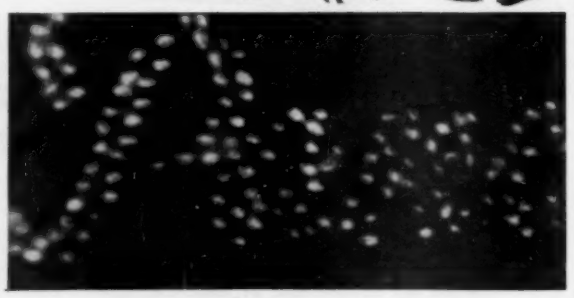
Panogen® GIVES YOU

POSITIVE SEED PROTECTION

This striking method of photographing the actual vapor action of Panogen was developed by Swedish scientist Dr. Olle Lindstrom. He compounded a special radioactive Panogen, which was then applied to seed. This seed was then placed on a photographic plate, with the result that the Panogen vapors actually photographed themselves. No other light source was used.



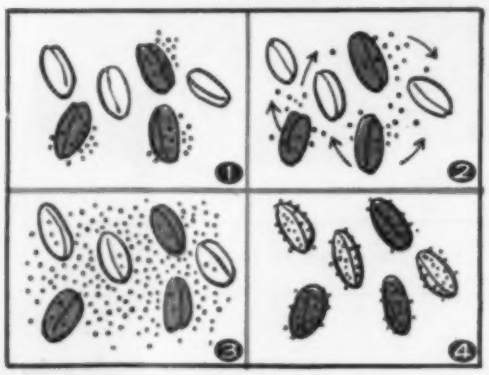




The photo, upper left, shows the effect of Panogen vapors at the time of application. The vapors are already beginning to cover every kernel of seed.

In the photo above, you see the seed a few hours later. Note how a protective film of disease-destroying fungicide now completely covers and protects each kernel of grain.

IT'S THE VAPOR ACTION!



Panel 1. Immediately following treatment: Most seeds show red areas and faint red coloring. The black dots indicate the millions of disease-destroying molecules which cling to each colored seed.

Panel 2. A few minutes after treatment: Vapors are beginning to spread, making contact with adjacent seeds. Note movement of vapors carrying fungicide molecules to seed surfaces that may have originally had less treatment.

Panel 3. A couple of hours after treatment: Vapors from the treated seeds have completely enveloped all seeds. These vapors penetrate every crack and crevice where disease spores may be lodged.

Panel 4. 24 to 48 hours after treatment: Disinfection is complete, thorough, permanent. The vapors carry no red dye, therefore, red coloring may not be visible on all seeds, but each kernel has been completely coated with the Panogen vapor. A chemical binding action locks this protection on every seed.

When you sell or process seed, your reputation is at stake. Thorough protection from disease is *business* protection for you.

Panogen is used by agricultural authorities throughout the world as a standard for testing new seed-treating products. This is your assurance that when you treat with Panogen, you are using the best available fungicide.

For a more detailed description of Panogen's vapor action, write for the free booklet, "The Benefits of a Modern Seed Treatment."

Panogen®

COMPANY

Division of Morton Chemical Company

RINGWOOD, ILLINOIS

Which grain dryer

is self-cleaning?

ARID-AIRE

... and you can

RENT IT!

Daycom, Inc.

Flour Exchange • Minneapolis 15

HOW LIFE CYCLE FEEDING*

CAN HELP YOU SELL MORE SWINE FEED

A nationwide educational campaign designed to focus attention on the latest advances in swine nutrition now being built into formula feeds for every phase of the life cycle of swine

(1959's BIG swine feed promotion)

GIANT LIFE CYCLE PROMOTION

helps you sell your complete feeding and management program

Visit . . . Scotland, England, France, Germany, Denmark.

★ $5

Swine Merit

16 GRAND

OF AN

Over-the-P

TRIP TO E

and Farm Tour of

AWARDED TO 4 HOG PRODUCE

AND 4 FEED DEALERS A

Here's the market-building program

Life Cycle Feeding is a nationwide educational campaign to sell the need for good management plus *formula* feeding for *every* stage of the Life Cycle—from breeder to feeder to market.

It's a market-building program designed to increase consumer demand by narrowing the gap between scientific concept and feeder acceptance of new feeds and feeding methods.

DEVELOPS NEW MARKETS

The broiler industry has shown us how the Life Cycle concept—with all its breeding, feeding and management aspects—could revolutionize an industry overnight.

The result was cheaper, more efficient production of meat—with expanded markets for both the meat *and* the feed needed to produce it.

PROVEN FEEDING PRACTICES

Your swine experts have proved the benefits and extra consumer profit of Life Cycle Feeding and management from pre-gestation to market. But the average grower is still chiefly concerned with simplified programs and formula feeds for the weaning-to-market stages of the Life Cycle only.

By promoting the need for formula feed straight through . . . by selling the need for modern swine management . . . the Life Cycle program can help you sell *new* feeds . . . and sell *more* feed . . . by helping you sell your entire program.

HERE ARE THE LIFE CYCLE FEED OPPORTUNITIES:

Pre-gestation, gestation, lactation, pre-starter, starter, growing, growing and finishing, and high level feeds

Use them to create new feed sales . . . sell them as a program.

0,000★
e Management
Award Contest

PRIZES

Pole

EUROPE

5 Countries

RS AND THEIR WIVES

ND THEIR WIVES

TOUR 5 COUNTRIES

Scotland, England, France, Germany, Denmark. Winners greeted by Agricultural Attachés . . . presented to Ministers of Agriculture . . . given guided tours of farm areas.

YOUR CUSTOMERS ONLY

To qualify for the contest, a swine producer must be nominated by a feed dealer . . . submit proof of participation in your swine program . . . plus proof of purchase of your swine feeds containing Terramycin.

YOU TAILOR THE CONTEST

Pfizer will submit a proposed entry blank to you. It includes "Yes" and "No" questions on management. You add any questions you want, personalize and print the blanks . . . distribute them to your dealers.

IT TAKES GOOD MANAGEMENT AND TOP RESULTS TO WIN

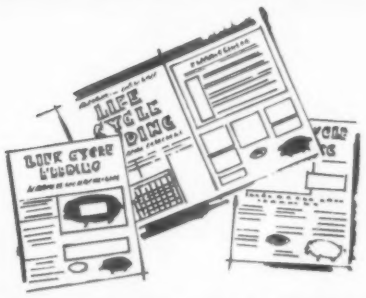
Your customers have until May 15, 1959, to enter the contest, answer questionnaire and submit the 35-day weight of one litter of pigs. Then, anytime up to August 30, the 140-day litter weight is recorded.

You select five top producers as semi-finalists. Each receives a Swine Management Merit Award . . . plus an opportunity to compete for the Grand Prize.

Entries will be judged by a 5-man committee of experts from the National Swine Growers Council, the USDA, and land grant colleges.

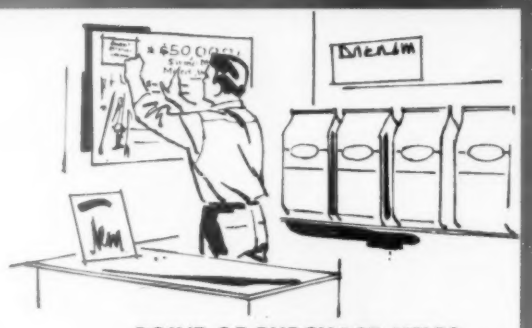
DEALERS WIN, TOO!

One tour of Europe for two will be awarded each winner . . . plus a duplicate prize for his dealer. Complete rules available from your Pfizer representative.



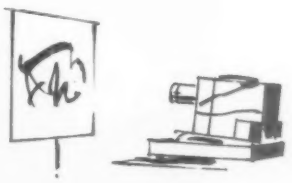
NATIONAL EDUCATION CAMPAIGN
with ads in leading national, regional and state farm and livestock publications.

DEALER EDUCATION MATERIAL
explaining the principles of Life Cycle Feeding as it relates to your program.

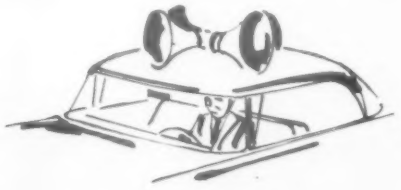


POINT-OF-PURCHASE HELPS
to remind your customers about Life Cycle Feeding as they come into your store.

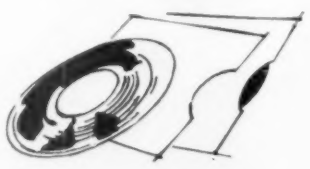
RADIO AND TV
featuring local radio and television farm directors in leading swine-raising areas.



FILM STRIP
specially prepared to help you promote your own Life Cycle Feeding Program.



PUBLIC RELATIONS CAMPAIGN
with publicity and public relations events promoting the latest scientific advances in swine feeding.



CONSUMER EDUCATION
featuring special recorded talks leading swine experts on each p of the Life Cycle of swine.

HOW TO TIE IN WITH THE

LIFE CYCLE

PROMOTION

1. The best way to sell the Life Cycle concept is to have a full Life Cycle line . . . a feed for each stage of the Life Cycle. You'll create new sales opportunities . . . new profit potentials.

3. Key your program to the Life Cycle national promotion. Build your individual store displays. Pfizer will supply the central "theme" piece shown on the preceding page.

2. Build your 1959 plans around the news of your newest feeds. Kick off your spring program with a promotion on your program for breeding stock. Tie it in with your complete program. Sell customers on your newest feeds . . . sign them up for your whole program.

4. Use the giant "SWINE MERIT AWARD" contest to bring new customers in to your dealers. Upgrade orders by selling present customers your newest feeds.

5. Use the educational materials offered for your dealers to promote local activity.

6. Make your Life Cycle Feeds better with Terramycin and add these bonus advantages to the sales appeal of your feeds:

- **FASTER GAINS**
  10% more
- **BETTER FEED EFFICIENCY**
  7.5% better
- **LESS FEEDING TIME TO MARKET**
  17 days sooner
- **LOWER FEED COSTS**
  $1.05 less per pig
- **FEWER RUNTS**
  39% heavier at weaning
- **BETTER HEALTH**
  When used at recommended levels, Terramycin in feeds can:

PREVENT OR TREAT

Scours or bacterial diarrhea.
Secondary diseases.
Atrophic Rhinitis (aid in maintenance of weight gains and feed consumption in the presence of this disease).
Leptospirosis (reduce incidence of abortion and birth of weak or dead pigs).

Pfizer

Chas. Pfizer & Co., Inc.
Science for the world's well-being

630 Flushing Ave., Brooklyn 6
6460 W. Cortland St., Chicago 35
1500 16th St., San Francisco 3
7600 Ambassador Row, Dallas 7
5251 Peachtree Industrial Blvd., Chamblee, Ga.
In Canada: 5330 Royalmount Rd., Montreal 9, P.Q.

® TERRAMYCIN BRAND OF OXYTETRACYCLINE

Harold Sullivan

HEADS ASSOCIATION — Harold Sullivan, Sullivan Sales Co., Memphis, has been elected 1959 president of the Memphis Hay & Grain Assn. The association is the corporation of the Memphis Board of Trade that operates its grain inspection department. Mr. Sullivan succeeds George S. Newell, Allied Mills, Inc., who recently was transferred to Fort Worth, Texas.

Say Growth Effect Not Wearing Off

MADISON, WIS. — The growth-stimulating effect of antibiotics in animal feeds doesn't seem to be wearing off, although that could happen in the future, according to University of Wisconsin nutritionists.

They note that in medicine, continued use of certain antibiotic drugs has somehow brought a change in the microorganisms the drugs work against. New "breeds" of germs have developed which can withstand the drugs.

Theoretically, say the scientists, the same thing could happen with antibiotics which are mixed with animal feeds in diets which are likely to be short of certain vitamins.

In a test last year, C. A. Baumann, J. E. Braham and H. R. Bird found that Aureomycin and penicillin still have essentially the same power to increase laboratory animal growth as they had when first tested seven years ago. That means, the researchers say, that the pertinent microorganisms seem to have remained unaltered.

FARM FORUM ANNOUNCED

SPOKANE, WASH.—The sixth annual Pacific Northwest Farm Forum sponsored by the Spokane, Wash., Chamber of Commerce, will be held Feb. 9-10. Theme of the forum is "Challenge of Changing Agriculture."

Tests Indicate Drylot Lamb Feeding Superior

JOHNSVILLE, S.C.—Feeder lambs fed in drylot gain faster, grade higher and sell for more, a two-year research project at the Clemson College Agricultural Experiment Station has revealed.

According to Dr. E. C. Godley, Clemson animal husbandman, and C. H. Mudge of the Johnsville station, who conducted the study, the drylot feeding is superior to that of forage or grain and forage, although the cost is somewhat higher per pound of gain.

Eight different drylot and forage-and-grain treatments were included in the tests, with approximately 60 lambs in each group, some of which were shipped into South Carolina, while others were bought locally.

Due to shipping charges, the locally bought lambs were more profitable.

AMERICAN ELEVATOR & GRAIN DIVISION
Russell-Miller Milling Co.
P.O. Box 157, Buffalo, N. Y., Phone MAdison 6007, Teletype BU 550
SHIPPERS CARLOAD LOTS—CHOICE WHEAT, CORN, OATS, BARLEY
TERMINAL ELEVATORS AT
BUFFALO — DULUTH — MINNEAPOLIS
New York Minnesota Minnesota

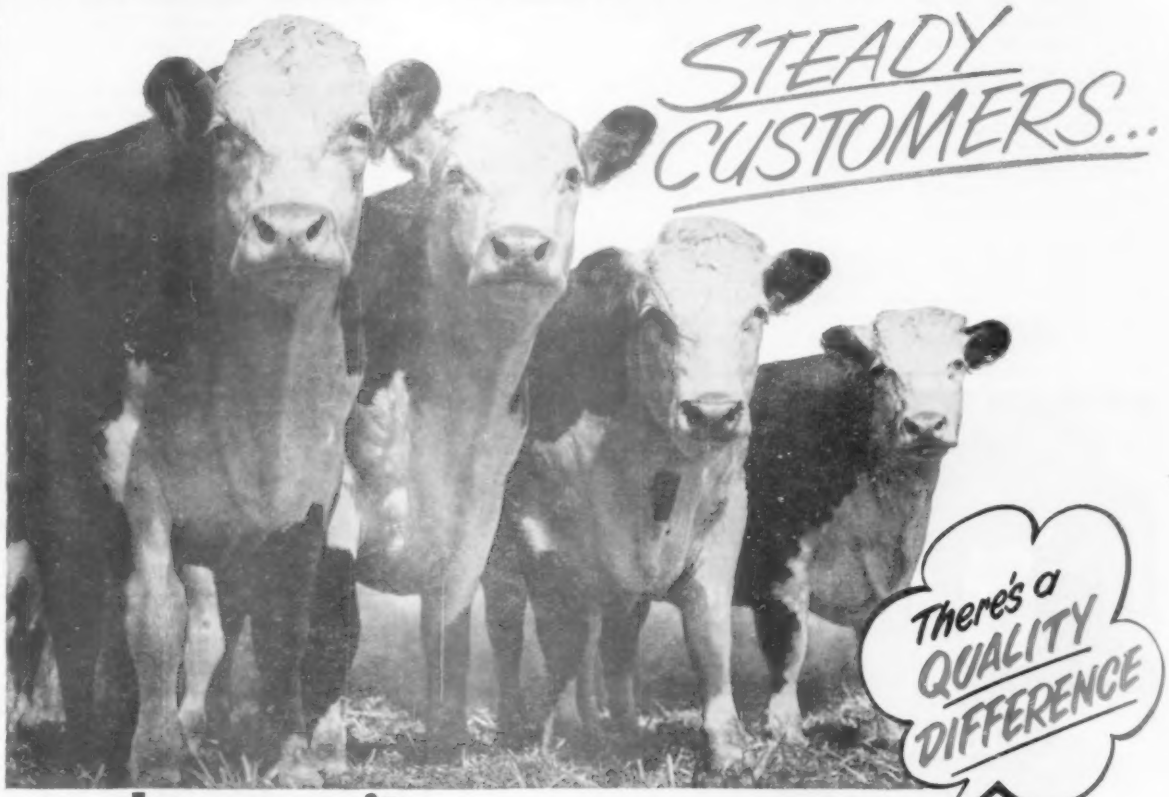
KEES & COMPANY
Processors of DRIED FISH SOLUBLE PRODUCTS
A "MUST" IN EVERY SWINE OR POULTRY RATION
Call or write for complete information and price
327 S. La Salle St., Chicago 4, Ill. Phone HArrison 7-1528

LA BUDDE
MILWAUKEE, WIS.
MALT SPROUTS
BREWERS GRAINS
DISTILLERS GRAINS
BEET PULP
AND 44 OTHER FEEDS

SEND FOR THE NEW ELTON CONVEYOR CATALOG
It will save money for you!
CHANTLAND MFG. CO.
Humboldt, Iowa

Feed Mixers Products
COLBY
PULVERIZED
Oats or Barley
ROLLED OATS
AND
FEEDING OATMEAL
COLBY MILLING, INC.
COLBY, WISCONSIN
PHONE LD-168-166 TWX Colby 8844

Minnesota makes



because it
raises the profit per head

Customers keep coming back to you for Minnesota Linseed Oil Meal. Because it provides mucin to help digestion, their animals eat better and gain faster than on other high protein meals. They're healthy, handsome and hungry for more!

Years of use and testing are with you when you recommend the Minnesota brand. You can mix it in your own formulas or sell it by the bag for feeding straight with complete confidence.

Minnesota Linseed Oil Meal pays off for your customers with more for the pound at the market. It pays off for you with repeat sales and a higher volume.

NOTE THIS RECENT PURDUE UNIVERSITY TEST SUPPLEMENT FED	SELLING PRICE PER HUNDRED-WEIGHT	MARGIN OVER FEED & STEER COST PER STEER
Soybean Oil Meal Alone	$20.50	—$ 9.38
PURDUE SUPPLEMENT A:		
With Soybean Oil Meal	$21.75	+$ 6.44
With Linseed Oil Meal	$22.00	+$12.00
With Cottonseed Oil Meal	$21.50	—$ 0.12
With Soybean Oil Meal and 5% Urea	$22.00	+$11.77
With Linseed Oil Meal and 5% Urea	$22.50	+$23.36

For Meal, Pellets Or Grits—Write, Wire Or Phone Us Your Requirements.

Minnesota LINSEED OIL CO.
Minneapolis 21, Minnesota • Phone: SUnset 8-9011

OUTLOOK

FINANCING FEEDER NEEDS

"The feed manufacturer is in business to manufacture feeds. Credit and financing are the business of banks and financial institutions—which should be shown the opportunities there are in agricultural production credit. The production of meat, milk and eggs today is big business and should be financed as such."

By J. D. Sykes
Ralston Purina Co.

Today the manufacturing of meat, milk and eggs requires big men and large capital investments. Many good operators need production loans.

During the past 10 years our company has handled more than $350 million in production credit loans with a loan loss ratio of 4/10 of 1%. Financing feeder needs today is a big business.

In 1925, less than 35 years ago, the income from crops and income from poultry and livestock were about equal. Each contributed about 50% of the total of approximately $11 million.

By 1957, while crop income had more than doubled, it dropped to 41.5% of total farm income. Income from poultry and livestock production, on the other hand, had more than tripled and accounted for 55.2% of the total. Government payments accounted for the other 3.3% of farm income. (See Figure 1.)

It is quite obvious from these figures that the production of meat, milk and eggs has become big business as it accounts for an increasing percent of our total farm income.

Population

Now let's look at what has happened to our total population and farm population during these same years. (See Figure 2.)

In 1925 with 115 million people to feed in this country, there were 31.2 million farmers to produce the food. In 1957 with a population of 173 million the farm population had decreased to 20.5 million—a drop of approximately 11 million farmers to feed a population that had increased 58 million. Fewer farmers to produce more meat, milk and eggs has required larger farm units, more efficient operation, better breeding, feeding, sanitation and management and more capital per unit.

This means that farming has become big business, commercialized with fewer family farms just for support of the family unit. This trend toward larger farming operations continues, with the corresponding increase in demands for financing during the growing period of the poultry or livestock.

As an example, the cash outlay for feed for about 6,000 broilers is about $2,500. For only 3,000 turkeys it's about $11,500. The supplement for 20 brood sows and litters costs some $1,725, and for 100 steeers (fattening and finishing) the cash outlay is approximately $1,400.

Consider the financing needed by

J. D. Sykes

AUTHOR—J. D. Sykes joined Ralston Purina Co., St. Louis, in 1941, was made director of public relations in 1946 and a few months later was elected a vice president of the company. He formerly served as chairman of the board of directors of the American Feed Manufacturers Assn., was chairman of the AFMA agricultural service division for four years, among other duties with the AFMA. Mr. Sykes is a member of the feed industry advisory committee of the U.S. Department of Agriculture, feed advisory committee to the college feed survey committee, feed industry advisory committee to the Poultry & Egg National Board, and U.S. representative to the Council of World's Poultry Science Assn. He is a native of North Carolina and a graduate of the North Carolina State College. Before joining Ralston Purina he served five years as poultry coordinator for USDA. Earlier in his career he was extension poultryman for the state of Mississippi, owned and operated a poultry breeding farm, hatchery and feed dealership, and was an extension poultryman in Alabama.

Figure 1

1925 Pop. 115,000,000

Farm Pop. 31.2 Million	

1957 Pop. 173,000,000

Farm Pop. 20.4 Million	

Figure 2

	Total Farm Income		
1925			
Crop	5,545,000,000	-	50.3%
Poultry & Livestock	5,476,000,000	-	49.7%
1957			
Crop	12,885,000,000	-	41.5%
Poultry & Livestock	17,134,000,000	-	55.2%

Through the years, PILOT BRAND Oyster Shell has been first choice with poultry raisers everywhere. That's because PILOT BRAND is almost 100 per cent calcium carbonate, the perfect eggshell material. Test after test proves that PILOT BRAND helps produce more eggs with stronger shells.

The big, day-in, day-out demand for PILOT BRAND means steady sales, fast turnovers, good profits for you. And we help keep customers coming your way with consistent national advertising in leading farm and poultry journals and on more than 70 prominent radio stations.

Order from your distributor . . . or write to us.

PILOT BRAND OYSTER SHELL FOR POULTRY

Oyster Shell Products Company
Mobile, Alabama

Almost everybody who brings problems to Bemis (where flexible packaging ideas are born) likes the flexible solutions that Bemis creates out of 100-year experience, skill and just plain flexible imagination.

WORTH 10,000 WORDS?

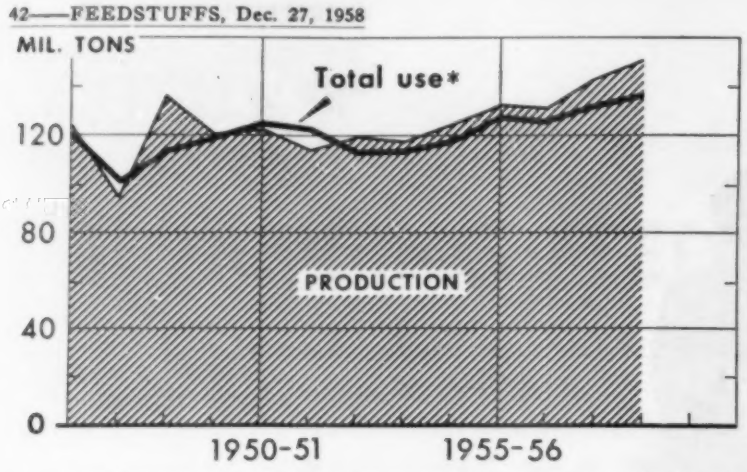
That's what Confucius said a picture is worth. And it could be.

But when it is your brand pictured on your multiwall-bagged feed, the value depends on several things: modern, eye-catching design—crisp, bright, multicolor printing—good register—superior inks—experience and know-how. In Bemis Multiwalls, you get them all . . . 10,000 words' worth. And it pays off in *sales*.

Bemis

BEMIS BRO. BAG CO.

Bemis may already be making the better package you need. Call, write, or ask your Bemis man.



* MARKETING YEAR BEGINNING OCT. 1 FOR CORN AND SORGHUM GRAIN; JULY 1 FOR OATS AND BARLEY
1958 BASED ON SEPTEMBER 1 INDICATIONS

FEED GRAIN USE, OUTPUT—Feed grain output has exceeded use every year since 1952, but the excess was holding at about 3 to 6% from 1952-56. In 1957-58, however, excess production was 8% and in 1958-59 the excess is expected to be about 11%. Abundance of feed grains and concentrates is a major feature of the outlook for coming years. There is fear that the large supply can stimulate excessive production of livestock and livestock products.

the broiler dealer with 300,000 broilers on feed in his market or the turkey man raising 20,000 to 30,000 turkeys.

Who Should Provide Credit?

Production credit to cover the feed required to get the poultry or livestock to market is needed. Who should provide that credit? In many cases the feed manufacturer has extended the necessary credit to the dealer or the feeder to carry him through to market. In other cases, the local bank, P.C.A., S.B.A., etc., has accepted this responsibility of providing local production credit for farm needs.

We in the feed industry must do a better job of keeping the local financing institutions informed of production loan opportunities. The days of the horse and buggy in the feed business are gone. One feeder today handles the same number of broilers it took three men to handle a few years ago. This feeder is a businessman with a large investment in fixed assets and higher sales volume than many merchants in town. He deserves the same consideration for local financing as any other merchant.

In most cases he can give security for the loan, which will appreciate over the loan period. This is in contrast to the automobile dealer whose asset depreciates during the loan period; yet in many cases the automobile dealer is being financed locally and the feed dealer or feeder is being financed by the feed manufacturer miles away from the feeder's city.

Bankers Need Facts

Bankers and other lenders must have the financial facts to support their loan. Therefore we must have a current financial statement, a budget showing total dollars needed, how advanced, and proof records showing financial soundness of the request. With these facts we are prepared to present a bankable request that should receive consideration.

Feeders and dealers not only need production credit financing, but with the trend to bulk and mechanization, funds for fixed assets are needed. Bulk bins, automatic feeders, bulk trucks, conveyors, grinders, mixers, etc., offer another opportunity for local financial agencies to increase the efficiency of feeder and dealer operations in their areas. Security for loans of this type is readily available.

The feed manufacturer has found it necessary to fill the local financing needs when local financial agencies do not provide the necessary local credit. The feed manufacturer is in business to manufacture feeds. Credit and financing are the business of banks and financial institutions. The feed manufacturer must maintain a close relationship with financing institutions and banks to make known to them the opportunities there are in agricultural production credit. The production of meat, milk and eggs is big business and must be financed as such.

Legal Weights of Commodities Listed

LEXINGTON, KY.—The department of feed and fertilizer, University of Kentucky, points out that it is often necessary for feed manufacturers and feeders to know the legal weight requirement for grain and seeds when these materials are sold for feeding.

According to the Kentucky Revised Statutes, KRS 363.040 (4821), the following weights constitute a bushel:

(1) Barley, 47 lb.; (2) bluegrass seed, 14 lb.; (3) bottom onion sets, 36 lb.; (4) bran, 20 lb.; (5) buckwheat, 56 lb.; (6) castor beans, 45 lb.; (7) clover seed, 60 lb.; (8) coal, 76 lb.; (9) corn in the ear, 70 lb. from Nov. 1 to Dec. 31 inclusive, and 68 lb. at all other times of the year; (10) corn meal, 50 lb.; (11) corn, shelled, 56 lb.; (12) dried apples, 24 lb.; (13) dried peaches, 39 lb.; (14) ear corn in the shuck, 75 lb.; (15) English bluegrass seed, 15 lb.; (16) fine salt, 55 lb.

(17) Flax seed, 56 lb.; (18) ground peas, 24 lb.; (19) hemp seed, 44 lb.; (20) Hungarian grass seed, 50 lb.; (21) Irish potatoes, 60 lb.; (22) millet seed, 50 lb.; (23) oats, shelled, 32 lb.; (24) onions, 57 lb.; (25) orchard grass seed, 14 lb.; (26) peas, 60 lb.; (27) plastering hair, 8 lb.; (28) rye, 56 lb.; (29) salt, 50 lb.; (30) sweet potatoes, 55 lb.; (31) timothy seed, 45 lb.; (32) turnips, 60 lb.; (33) unslaked lime, 35 lb.; (34) wheat, 60 lb.; (35) white beans, 60 lb.

BO-DEE MINERAL STABLE D2

WISCONSIN ALUMNI RESEARCH FOUNDATION
Approved for VITAMIN D upon periodic tests

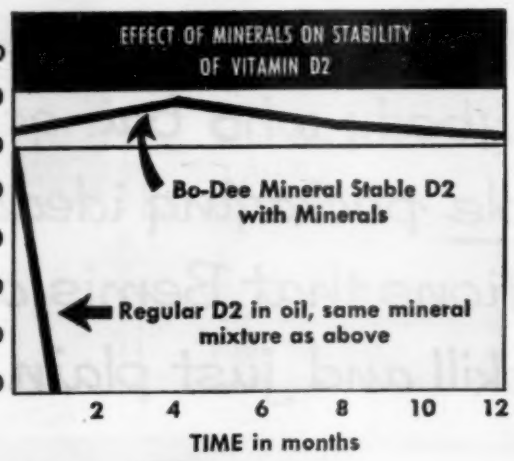
Now APPROVED

For 12 months stability in the presence of these listed minerals by

WISCONSIN ALUMNI RESEARCH FOUNDATION

Note: MINERAL STABLE D2 fully present at the end of 12 months.
Ordinary D2 practically gone in 30 days.

Ground Limestone	41.23%	Ferrous sulfate	0.50%
Steamed bonemeal	15.00	Copper sulfate	0.15
Tricalcium phosphate	13.00	Manganese sulfate	0.10
Magnesium sulfate	10.00	Cobalt sulfate	0.02
Iodized sodium chloride			20.00%



This is a product of N. V. PHILIPS-ROXANE, The Netherlands
The world's largest manufacturer of Vitamin D

Sold exclusively by

Send for new low prices and technical bulletin

BOWMAN FEED PRODUCTS, INC. Holland, Michigan

170 E. California Street, Pasadena 1, California • 600 South Michigan, Chicago 5, Illinois

CHARLES BOWMAN & CO., 220 East 42nd St., New York 17, N.Y.

Distributors for NORTH AMERICAN PHILIPS COMPANY, INC.

BOWMAN FEED PRODUCTS, INC., Holland, Michigan

Please send me full information and prices on new MINERAL STABLE VITAMIN D2.

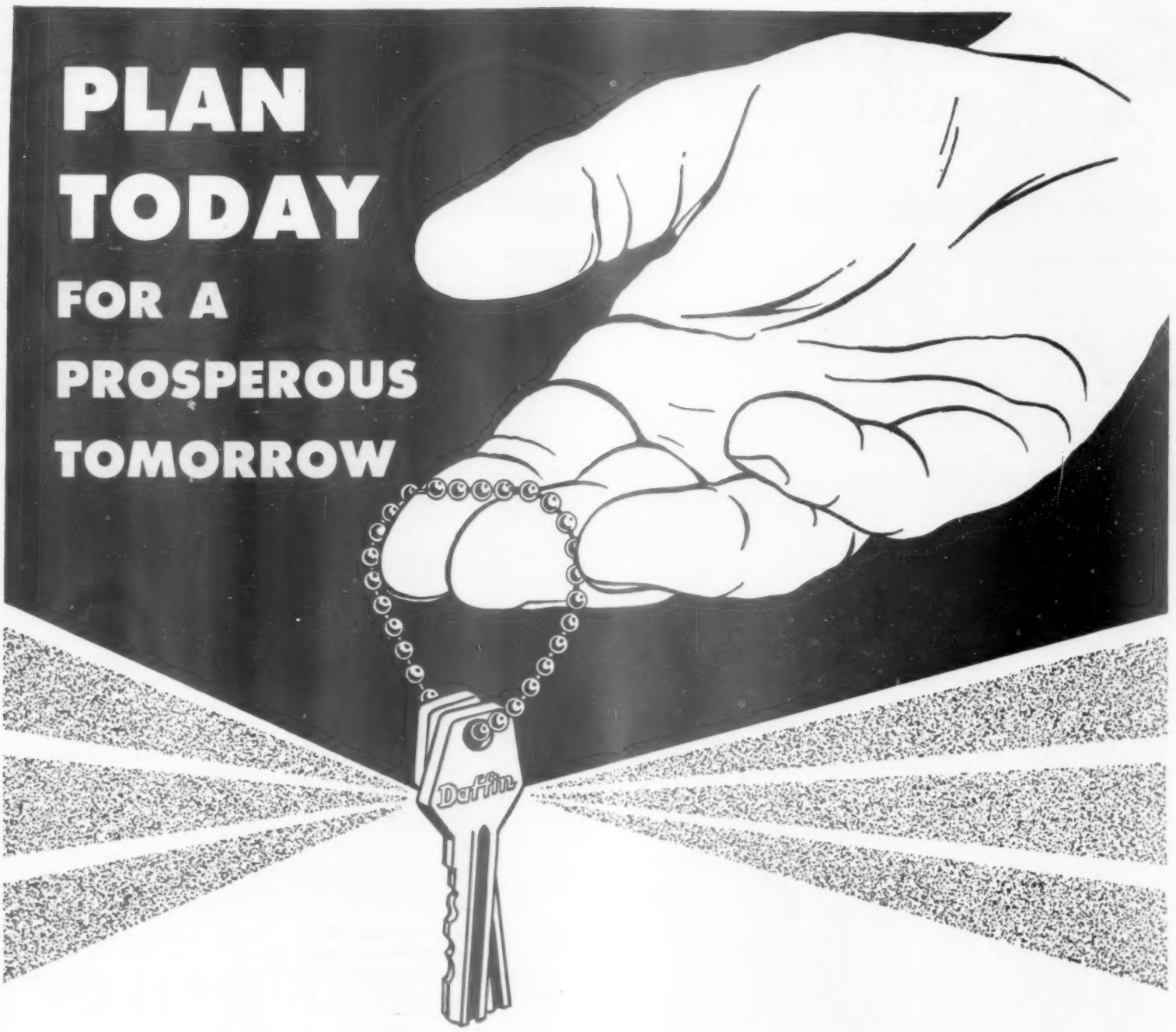
NAME_____

COMPANY_____

ADDRESS_____

FARMERS FRIEND MINERAL FEED
WRITE FOR DELIVERED PRICES
FARMERS FRIEND MINERAL CO.
NAPOLEON, OHIO

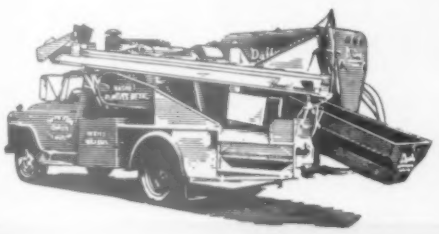
PLAN TODAY FOR A PROSPEROUS TOMORROW



START ON THE ROAD TO SUCCESS WITH AN IGNITION KEY..!

The keys to your Daffin Feedmobile give you access to a very prosperous business. You become a business leader in your community immediately.

With a Daffin . . . you are able to: pick up at least 2 to 4 new feed customers each week; save farmers $5 to $15 per ton on their feed; merchandise more related farm-supply items; become more selective in your feed accounts.

WRITE TODAY FOR THE FACTS ON THE DAFFIN  "PLAN FOR PROFIT"

Daffin MANUFACTURING COMPANY

Extensive network of Daffin Service-Parts Depots in U. S. and Canada

DAFFIN MANUFACTURING COMPANY, 3272 NORTH PRINCE STREET, LANCASTER, PENNSYLVANIA

Feed Service BULLETIN BOARD

IDEAS TO HELP YOUR CUSTOMERS

Beef Industry Broadens

More feeder cattle will have to be produced in the Midwest or shipped in from southeastern states to satisfy the needs of midwestern cattle feeders in the years just ahead, according to livestock authorities such as Henry Mayo of Purdue University.

The western states have long supplied most of the feeder cattle to the Corn Belt. But he points out that a growing population in the West, plus more irrigation and more feed available, means that more meat animals will be finished for market there. In addition, the Midwest's own growing population will be requiring more fed cattle, so the need for more feeder cattle to go into feedlots is further emphasized.

The present-day trend already is to raise more feeder cattle in the Midwest and Southeast. From 1948-58, beef cow numbers in Indiana, for example, have doubled; in eastern and southern states the increase was 13%.

Sale of cattle and calves brought $192 million in cash income to Indiana farmers alone during 1957, Mr. Mayo reports. This was 18% of the cash receipts on Hoosier farms and 2% more than the previous year.

◆

News on Egg Breakage

Poultry flock owners troubled with cracked or broken eggs during the summer months—and it is a major industry problem—may find their losses reduced by 50% or more with the discovery that as little as 1 oz. of ascorbic acid (vitamin C) per ton of feed increases shell thickness significantly.

It is well known that hot weather normally causes laying hens to slow down in body activity. This leads to lower feed consumption, so less calcium is available for bulding strong shells. This in turn means a greater breakage problem. In fact, the total loss amounts to an estimated $100 million annually.

But in a two-year study, Dr. Paul Thornton, assistant poultryman with the Colorado experiment station, found that putting this small amount of vitamin C in the feed of laying hens did an unusually good job of maintaining shell thickness. Yet the extra cost of the vitamin C is negligible—at present it runs to only 30¢ oz.

The poultry specialist cautioned that too much ascorbic acid can have an adverse effect, and that the 1 oz. level in a ton of feed gives best results. And at present it appears to have little value for winter feeding.

◆

Avoid Abrupt Feed Change

Dairy cattle shouldn't have their ration changed suddenly if producers expect to maintain milk production. Abrupt shifts in rations, particularly in types of silages, can cause a 10 to 20% drop in milk production, Ohio State University researchers have found.

The problem is worse when the quick change is made from corn silage and hay to forage-crop silage. And the problem has become more serious because of the increased use of forage-crop silage. In Ohio, for example, ensiling of forage crops has increased 80 times in the last 15 years.

The researchers recognize that many farmers are using both meadow-crop and corn silage in the winter and often store both types in the same silo, so have a hard time avoiding the abrupt changes in the ration. Extensive feeding trials followed in an attempt to resolve the problem.

Among the findings were these:

Permaglas® Storage Structures eliminate packaging costs

Texas Corporation maintains contamination-free operation in changing from costly packaging to economical bulk handling.

Towering above the flat Texas Plain at Big Spring—four Permaglas Storage Structures testify to the wisdom of the change from packaged to bulk materials-handling and storage.

Specified by Blaw-Knox engineers, materials-handling consultants for a wide variety of industries such as foodstuffs, chemicals, feed ingredients, rubber, plastics and pharmaceuticals — the Permaglas Structures met all requirements. These steel structures — glass-protected inside and out* safeguard products from contamination and discoloration ... and are ideal for storing bulk materials — granular, flaky, pulverized, hygroscopic, contaminable, edible or non-edible.

Delivered and erected quickly at low cost, the Permaglas Structures require little maintenance—no need for painting.

Permaglas system planning service helps you evaluate your materials-handling methods. The Permaglas man in your area will work with you and your staff to give you a complete and factual description, cost summary and recommendation on your present or future materials-handling system. The Permaglas Service includes data on A. O. Smith's exclusive mechanical sweep-arm bottom unloader for *complete* mechanization of your bulk handling and storage operation.

* HYDRASTEEL PROCESS covered by U. S. Patent No. 2,754,222

Through research ... a better way

A.O.Smith CORPORATION

HARVESTORE PRODUCTS

Kankakee, Illinois

A. O. Smith INTERNATIONAL S.A., Milwaukee 1, Wis., U.S.A.

Casden Petroleum Corporation's three 20' x 50' Permaglas Bulk Storage Structures are loaded by pneumatic conveyor. They discharge ⅛" cube polystyrene molding pellets by gravity into bulk transfer trucks below. A fourth 14' x 15' Permaglas Structure safely stores crumb rubber.

A. O. SMITH CORPORATION
Harvestore Products, Kankakee, Ill., Dept. FS-128
I am interested in obtaining more facts on Permaglas Mechanized Storage Units.
☐ Please have representative call for appointment
☐ Send me latest Permaglas Mechanized Storage Unit details
Name .....
Firm .....
Address .....
City .....Zone .....State .....

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

MARCO DIGESTER TANKAGE
HIGH QUALITY
60% PROTEIN
for hog feeds
Call collect anytime for quotations — MA 6-2803
MARCO CHEMICAL COMPANY
P. O. BOX 8 • FORT WORTH 1, TEXAS

Lilly FEEDLOT INTERVIEW WITH PETE VELDKAMP, LUVERNE, MINN.

"Hygromix® sold itself by performance"

"You're more apt to follow a good practice when you prove it to yourself as we did," Minnesotan says.

by Eugene S. Hahnel

Pete Veldkamp, of Luverne, Minnesota, raises about 400 pigs a year. He weans his pigs at about four to five weeks and puts them on a complete feed containing Hygromix as soon as they'll eat. He's well satisfied with the results. "Hygromix sure did a good job taking care of worms . . . we don't have any bother with them now."

Just like a lot of other hog raisers, Pete Veldkamp proved the value of Hygromix feeds to himself. He had been worming with a liquid wormer twice a year. When he heard about Hygromix, he decided to see for himself how good it was. After his pigs had been on it, he test-wormed them at about 120 pounds. "We didn't see a worm . . . not a one!"

This story is being repeated all over the hog belt. Swine raisers have proved to themselves that Hygromix does kill worms and prevent them from laying eggs. They are convinced that Hygromix-fortified feeds give continuous, full-time protection against worm damage during the pigs' critical growing period.

Pete Veldkamp of Luverne, Minnesota, has a Missourian's attitude. "You've got to show me," says Pete. His Hygromix-fortified feed did just that.

Robert Peiper (left), feed manufacturer's representative, is using Pete Veldkamp's experience to back up his selling story about Hygromix in-feed worm control.

HYGROMIX®

(S. hygroscopicus fermentation products, Lilly*)*

Lilly

MAKERS OF STILBOSOL® (diethylstilbestrol premix, Lilly)
Procaine-Penicillin-G • Vitamin B_{12}

ELI LILLY AND COMPANY, AGRICULTURAL AND INDUSTRIAL PRODUCTS DIVISION, INDIANAPOLIS 6, INDIANA

NOW..! LOAD or UNLOAD BULK FEED

with the PAMCO BACK SAVER

Attach this inexpensive AUGER UNIT to a grain box and you can handle any feed in bulk!

- Ideal for hoist trucks
- Complete hydraulic operation
- Can load as easily as unload
- Will handle bulk feed grain or pellets
- Minimum breakage of pellets

Conversion units can be mounted on your present grain box.

For Complete Information Write:

PRODUCTIVE ACRES MFG. CO.

406 BROADWAY KEOTA, IOWA PHONE: ME 63071

OTHER INSTALLATION POINTS: Englewood, Colo.; East Grand Forks, Minn.; Delphi, Indiana; Portland, Oregon; Jefferson, Georgia.

CHECKERBOARD GRAIN COMPANY

Buyers and Sellers of

MILLFEEDS, GRAINS AND GRAIN PRODUCTS

CHICAGO KANSAS CITY ST. LOUIS MINNEAPOLIS

When a poultryman buys a calcium supplement, he's looking for a product that will build top-quality egg shells and one that his birds will eat readily. Why not sell him the oyster shell which does the job best: EGGSHELL BRAND Oyster Shell?

ECONOMICAL TO FEED—Triple-screening and triple-washing provide a dust-free product. Here's why:

SOFT AND DIGESTIBLE—No other calcium product for poultry tops EGGSHELL BRAND for digestibility.

HEAT STERILIZED—Great care in heat sterilization makes pure, soft reef shell highly palatable to birds.

TRACE MINERALS—This great egg shell and bone builder has a guaranteed analysis of 97% Calcium Carbonate, plus highly-important trace minerals.

EGGSHELL BRAND OYSTER SHELL

a product of

OYSTER SHELL CORPORATION

BALTIMORE, MARYLAND

★ Buy and Sell Through WANT ADS ★

Lowered digestibility is encountered at first when dairy cows are switched to forage-crop silages, but in three to six weeks the rumen bacteria have adapted to the situation; also legume-grass silages may contain some undetermined substance or substances which limit milk production.

The Ohio researchers conclude that a minimum of change should be made in the rations and that the following feeding suggestions may help in preventing drops in milk production at the same time maximum use is being made of forage-crop silage:

1. Cows should be adapted to forage-crop silage during the month before freshening.
2. Changes in the amount of supplemental grain fed should be made to compensate for the grain in corn silage, when changing to forage-crop silage.
3. If possible, dairymen should avoid refilling silos containing grass-legume silage with corn silage. If this is necessary, corn and cob meal should be used to preserve the forage-crop silage (150 lb. per ton).
4. Early-cut forage should be used for silage-making.
5. The digestible protein content of the total ration should be maintained at 8% or higher when large amounts of forage-crop silage are being fed.

◆

Milo Good for Poultry

Pure, clean milo is a good feed for poultry, despite beliefs of some poultrymen, according to Kendrick A. Holleman, a University of Nebraska poultry specialist. There has been some discrimination against milo by some midwest poultrymen, he says, due to claims that it causes dark, mottled or poor quality yolks in commercial eggs; light colored egg yolks; or sickness and death as a result of some form of poisoning.

But, the specialist points out, no experimental data indicate that milo contains gossypol—the major cause of dark or "grass" yolk. In fact, no experimental data show milo to produce any bad effects on egg quality. Milo will cause egg yolks to be light colored but these light colored eggs are in demand on many markets and uniformity of yolk color is of prime importance.

Further, there is no more danger of poisoning birds with milo than with corn, oats or any other grain. Any sickness caused by milo will be a result of condition rather than a feature of the grain, Mr. Holleman emphasized. Immature grain or high moisture grain can cause some disturbances but if the grain is in good condition, no trouble will develop.

Form Ingredient Firm At Hayward, Cal.

HAYWARD, CAL. — The Northern California Animal Feed Co., Inc., has been formed at Hayward as a branch of the Southern California Animal Feed Co., Inc., of Covina, near Los Angeles.

The two firms receive materials rejected from firms manufacturing food for human consumption, such as Kellogg Co., the Golden Grain Macaroni Co., and others, and prepare it for resale to feed firms.

The Hayward Company was formed as a partnership under the name of Animal Feed Co. earlier in 1958, but later changed its organizational set-up and name. Roy I. Keith is president of the Hayward branch.

The Covina company, about four years old, has been moved and expanded. Harry W. Kiefer, president of this concern, is vice president of the northern branch.

Mr. Kiefer has also announced plans to open a third branch in Memphis, Tenn., to be located close to a new Kellogg plant being erected at Memphis, in order to be near the source of supply.

Mr. Keith was with the Bay Cities Equipment Co. before joining the feed firm.

A bride knows little about her husband until she has messed up the check stubs a couple of times.

◆ ◆ ◆

A man walked into a New York coffee shop during a busy lunch hour rush, ordered a cup of coffee, gulped it down, left 10¢ on the counter and walked out. Quickly the waitress scooped up the coin, put it in her pocket and turned to the next customer—only to catch the cold eye of the owner staring at her.

She hesitated a moment, then shook her head sadly. "What a screwball!" she confided. "Leaves a 10¢ tip—then walks out without paying."

◆ ◆ ◆

Husbands often come home from work too tired for words—but their wives insist on talking anyway.

◆ ◆ ◆

The lovely young model was looking very glum. "What's the matter, Tina?" asked the photographer.

"It's my boy friend," Tina explained. "He's lost all his money."

"Ah," the photographer was sympathetic. "And I'll bet you're sorry for him."

"Yes," said the model wistfully. "He'll miss me."

◆ ◆ ◆

Coffee, aspirin and vodka consumption is hitting new peaks in the U.S., according to a recent bulletin. Package deal, eh?

◆ ◆ ◆

A play boy was proposing to a girl who refused to take him seriously.

"Im fast and loose now," the playboy said, "but if you'll marry me, I'll be just the opposite of what I am today."

"That's what I'm afraid of," the girl replied. "The opposite of fast and loose is slow and tight."

◆ ◆ ◆

The theater usher was astonished to see a kangaroo sitting in the front row munching a bag of peanuts.

He whispered, "Where'd you get the peanuts? I thought the machine was broken."

BEFORE
they used to call me "runt" until I started on feeds with
SUCRO-FLAVOR
TRADEMARK
AFTER
FLAVOR CORPORATION OF AMERICA
3037 North Clark Street • Chicago 14, Illinois

New Feed Tag Statements for

DYNAFAC PREMIX

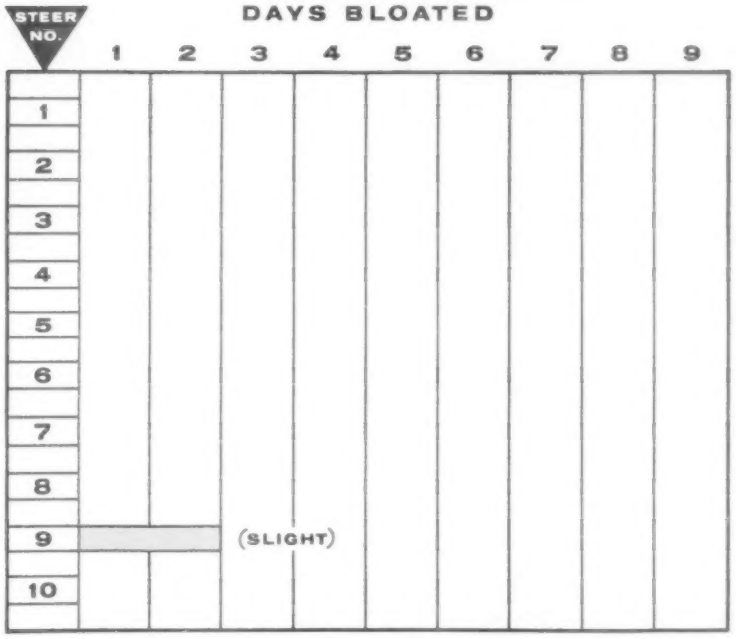
cleared for immediate use

CATTLE AND CALVES:

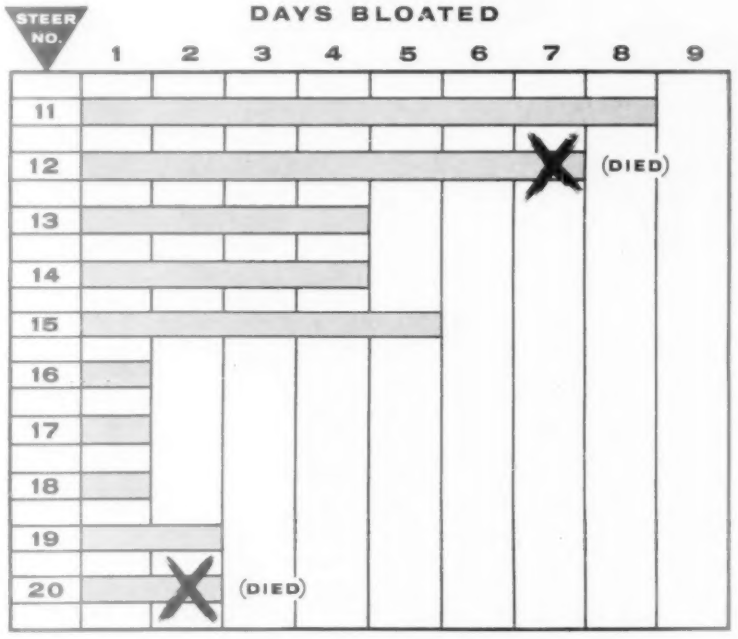
1. For promoting growth, feed conversion, bloom, and on full feed earlier.
2. As an aid in minimizing the occurrence of feed lot bloat due to high consumption of concentrates.
3. As an aid in minimizing the occurrence of feed lot founder due to high consumption of concentrates.

In a typical controlled test at an agricultural college it was shown that DYNAFAC PREMIX practically eliminates danger of feedlot bloat and founder in self-feeding practices. Here are the results of the test:

High Concentrate Self Feeding with 200 Grams of DYNAFAC PREMIX per ton of ration



High Concentrate Self Feeding without DYNAFAC PREMIX



In the 140-day self-feeding test two groups of ten steers each were placed on high concentrate rations. DYNAFAC PREMIX was added to the feed in one pen and only one steer suffered from mild bloat for two days. No founder occurred.

There were 35 bloat-days among the control group without the DYNAFAC PREMIX. Without DYNAFAC PREMIX there were two mortalities due to bloat.

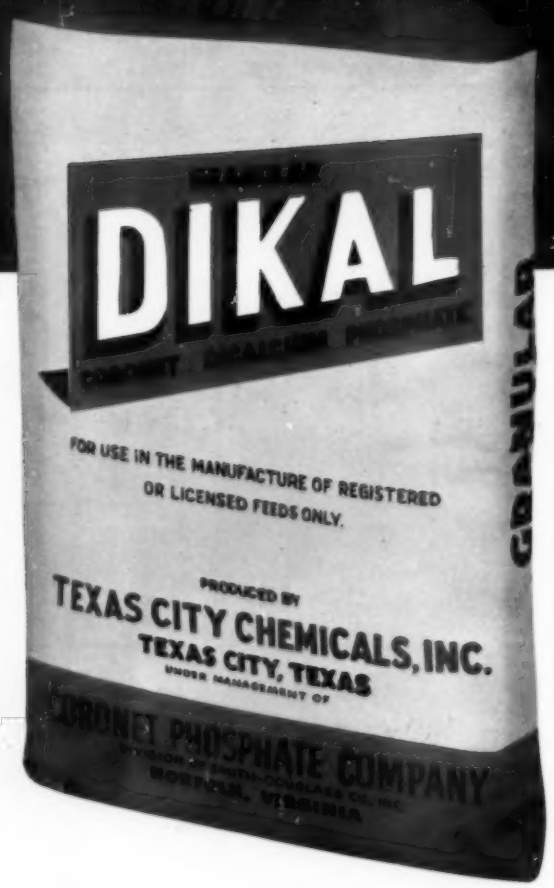
This is news your customers have been waiting for. DYNAFAC PREMIX makes even high concentrate self-feeding practical and by minimizing feedlot bloat and founder, your feeds perform better.

Because of the increased demand from feeders everywhere, wire or write for your supply of DYNAFAC PREMIX today.

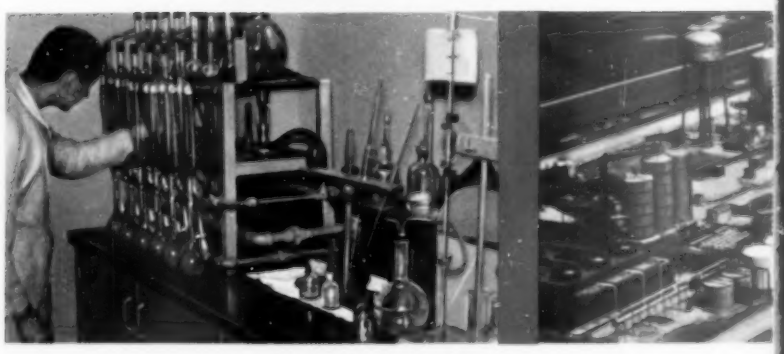
Armour and Company, Chicago, Illinois

DYNAFAC PREMIX IS DISTRIBUTED NATIONALLY FOR ARMOUR BY THE CHEMICAL DEPT., McKESSON & ROBBINS, INC.

INCREASE GAINS..



RESEARCH



CORONET GRANULAR DIKAL is backed by 50 years of RESEARCH which delivers an increasingly BETTER PRODUCT . . . year after year!

50 CORONET...50 YEARS OF RESEARCH...QUALITY CONTROL...SERVICE

with Higher Dicalcium Phosphate Levels

FEEDING TRIALS PROVE BENEFITS

Rations supplemented with higher dicalcium phosphate levels produced faster liveweight gains and more efficient feed utilization in a series of cattle feeding tests at State Agricultural Experiment Stations.

IOWA STATE[1]

Tests conducted by Iowa State College researchers indicate cattle receiving higher dicalcium phosphate rations graded higher at slaughter and returned greater margins over feed costs. The Iowa State report concludes . . . in some cases a higher level of total ration phosphorus, possibly as high as 0.3 percent, may well be needed.

PURDUE[2]

According to a study conducted by Purdue University researchers, raising the phosphorus level in a corn-soy ration from 0.30 to 0.45 per cent improved rate of gain 29% and feed efficiency 6.6% when fed to growing swine on ladino pasture. A further increase in phosphorus to 0.60% improved feed efficiency 5.7%, but failed to stimulate gains further.

Several pigs on the corn-soy basal ration exhibited borderline phosphorus deficiency symptoms.

SOUTH CAROLINA[3]

An animal deficient in phosphorus from either hereditary genetic defects, or because of prior consumption of a low phosphorus ration may bloat, regardless of the level of nutrition in the feed crop. Therefore, a critical phosphorus deficiency in ruminants should be corrected through feeding of dicalcium phosphate or other mineral phosphates or by feeding high phosphorus concentrated feeds prior to being placed on luscious legume pastures.

TEXAS[4]

In feeding trials on the King Ranch in Texas, cows fed supplemental phosphorus weaned 39% more calves, averaging 50 pounds more weight per calf. In addition, feed lot operators in the Southwest have discovered that higher phosphorus levels result in faster gains.

USE MORE CORONET GRANULAR DIKAL IN YOUR FEEDS

1. Different Kinds and Amounts of Phosphorus in Fattening Cattle Rations. Agricultural Extension Service A. H. Leaflet 209. Iowa State College. Wise Burroughs, Arthur Raun, Edmund Cheng, C. C. Culbertson.
2. Phosphorus and Protein Levels for Growing-Finishing Swine on Legume Pasture. A. H. 215. Purdue University. C. E. Jordan, J. H. Conrad, M. P. Plumlee, W. M. Beeson.
3. Relation of Phosphorus Deficiency to Acute Bloat in Ruminants. H. P. Cooper, 69th Annual Report South Carolina Agricultural Experiment Station, Clemson, S. C., May, 1957.
4. Methods of Supplying Phosphorus to Range Cattle in South Texas. Texas Agricultural Experiment Station Bulletin 773. E. B. Reynolds, J. M. Jones, H. H. Jones, J. F. Fudge and R. J. Kleberg, Jr.

QUALITY

CORONET GRANULAR DIKAL, produced under meticulous and carefully controlled manufacturing conditions at this modern facility in Texas City, Texas . . . is a highly available source of phosphorus.

SERVICE

CORONET GRANULAR DIKAL assures a constant supply when you want it . . . in any desired quantity. Feed manufacturers enjoy faster, more dependable service from Texas City . . . the ONLY feed grade dicalcium production point west of the Mississippi River.

DUST-FREE

CORONET GRANULAR DIKAL eliminates annoying dust in bagged or bulk shipments. Additionally, Granular Dikal improves dispersion because of similarity in particle size to other feed components.

Let us figure the cost of DIKAL delivered to your plant

DIKAL
CORONET DICALCIUM PHOSPHATE

CORONET PHOSPHATE COMPANY
Norfolk 1, Virginia

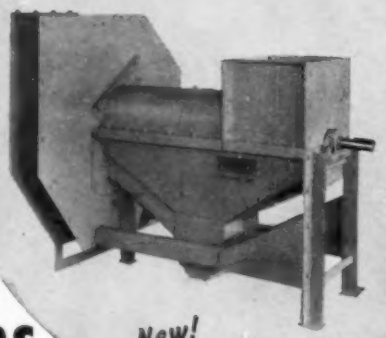
A Division of **Smith-Douglass Company**, Incorporated

Want Faster Corn Shelling and Lower Cost Operation?

Specify

TRIUMPH Zip

COB BLOWING CORN SHELLERS



New!
Triumph No. 500
CORN SHELLER

More Universally used by Feed Mills than any other make Sheller.

TRIUMPH ZIP Cob Blowing Corn Shellers are modern machines developed to simplify the shelling and cleaning of corn, and the handling of cobs, for Feed Mills. With TRIUMPH, faster shelling rates are possible, with less first cost and lower operating costs.

Although simple in design, they contain many exclusive features developed by TRIUMPH engineers. TRIUMPH Zip Cob Blowing Corn Shellers are easy to apply and to operate . . . but capable of handling any condition of ear corn brought to Feed Mills, efficiently and fast. Maintenance, breakdown, and chokings are reduced to a minimum assuring lowest cost operation.

Thousands of TRIUMPH Zip Cob Blowing Corn Shellers are in use in Feed Mills everywhere. Their popularity is soundly based on proven performance and results.

TRIUMPH Engineers and Distributors offer years of experience in handling ear corn and designing corn shelling systems . . . a plus value gained only through buying TRIUMPH.

No. 100
Ideal for Smaller Feed Mills
Simple, Dependable, Efficient
6 to 8 tons per hour.*

No. 150
Designed for use on
Mobile Feed Mills
or other portable uses
6 to 8 tons per hour.*

No. 300
Fast Shelling for Larger Mills
at low first cost
13 to 18 tons per hour.*

No. 500
New Rugged Sheller for
Heavy Shelling Requirements
18 to 22 tons per hour.*

*Shelling rate based on tons per hour of machine picked ear corn.

TRIUMPH
CORN SHELLERS
THE C. O. BARTLETT & SNOW CO.
6249 HARVARD AVENUE • CLEVELAND 5, OHIO

GET FULL DETAILS. *Write for the catalog today!*

★ Buy and Sell Through WANT ADS ★

Forage Testing Service to Begin In Pennsylvania

UNIVERSITY PARK, PA.—A new forage testing service will get underway in Pennsylvania shortly after Jan. 1. It is designed primarily for farmers interested in reducing their feed costs by producing and utilizing good quality roughage to best advantage, according to Pennsylvania State University.

Dr. Richard S. Adams, extension dairy specialist who is chairman of the program, says, "Analyses will be routinely run on corn and other annual silages, as well as hay and hay-crop silages. In addition, samples of grain and home or custom-mixed grain mixtures will also be analyzed for those farmers who sign up for the service, which will be conducted by the Agricultural Extension Service of the Pennsylvania State University, with county agricultural agents from throughout the state cooperating."

Probable Cost

Sample cartons, forms and hay samples will be provided each county, and will be sold to farmers by the county agents. While final prices have not yet been established, it is believed the price for each sample will be approximately $5. The core samplers to be used in containing hay samples will sell for about $12.

Samples of baled or loose hay will not be accepted unless the sample has been taken with these samplers according to outlined sampling procedures. This is necessary, Dr. Adams says, so that a representative sample of hay can be obtained.

Following receipt of samples by the commercial laboratory, whose services have been retained for the program, the samples will be analyzed. The laboratory will return the analytical results of each sample to the university, where specialists will calculate estimated digestible protein and total digestible nutrients (TDN), as well as designate a quality grade to each sample.

The completed report for each sample will be mailed to the farmer from the university, and a copy will be sent to the county office concerned. A copy will also be furnished to any other party concerned, generally the local feed dealer, for an additional small fee.

If a farmer desires, a suggested feeding program will be provided at no extra charge. The feeding program, however, will not be developed unless the farmer provides all necessary information on special forms which will be provided by the county agent. The farmer must also have samples of all roughages being fed. The feed programming service will also include least-cost grain formulas. Suggested feeding programs will be developed for beef, sheep and swine, as well as dairy cattle.

The hay samplers will be sold outright to individual farmers for cost, plus handling, or may be loaned for a specified period of time, when a deposit is made to cover the full cost of the sampler. If the sampler is not returned within the specified period, it will be considered sold.

Dr. Adams says, "We believe that even those farmers who submit samples sporadically can benefit greatly, because they will have a better knowledge of what constitutes good quality roughage. Those farmers who wish to take full advantage of the program can make even greater gains.

"Based on our dairy demonstration farm results to date, this type of program can increase returns in a 25-cow herd by as much as $700-$1,900. In most dairy herds 6-10 samples of roughage would usually be required each year, depending upon the number of roughages fed. Thus a dairy farmer might be able to decrease his feed costs by as much as $500 or more at a cost of approximately $30-$50 a year."

PUNCHY PROMOTION — The old line, "You can't punch your way out of a paper bag," has been used as the basis for a popular stunt on the "County Fair" NBC network TV show. It has also proved a good promotion for Union Bag-Camp Paper Corp., which supplied the bags. Several sports personalities, including James J. Braddock, former heavyweight boxing champion (at left), have been unable to punch their way out of the Union Bag, six-ply multiwalls. With Mr. Braddock is Herbert Landon, production supervisor of the show.

KAFIR & MILO
Largest Dealers in Southwest
MID-CONTINENT GRAIN CO.
Board of Trade Victor 2-4671
KANSAS CITY, MO.

FISH MEAL • FISH SOLUBLES
LIVER MEAL—VITAMIN OILS
FEATHER MEAL—FEED INGREDIENTS
ALBUMINA SUPPLY CO., INC.
82 Beaver St., New York 5, N. Y.

For information or a quotation on *Myvamix Vitamin E Feed Supplement*, write ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • Charles Albert Smith Limited, Montreal and Toronto • Or, contact the distributor nearest you.

Vitamin E is considered by many authorities to be an essential part of a nutritionally complete diet for chickens, turkeys, dogs, and other animals. We will be happy to send literature references on request.

The "d" means the vitamin E in *Myvamix Vitamin E Feed Supplement* is the same stereoisomer that appears in nature. 1 milligram of *d*-alpha-tocopheryl acetate is equivalent to 1.36 International Units of Vitamin E.

Myvamix®
VITAMIN E
FEED SUPPLEMENT
DPi
MADE IN ROCHESTER, N. Y., U. S. A. BY
DISTILLATION PRODUCTS INDUSTRIES • DIVISION OF EASTMAN KODAK COMPANY
CONTAINS distilled d-alpha-tocopheryl acetate concentrate absorbed on soy grits.
20,000 INTERNATIONAL UNITS OF VITAMIN E PER POUND

The vitamin E in *Myvamix* is on a dry, non-dusting soy grits base. We use grits instead of meal because they have less fiber, less moisture, more protein, more uniform particle size, and are dusted to remove hulls and powder. All this means a higher quality product, one that's as easy to handle as anything in your mill.

With *Myvamix*, you know exactly how much vitamin E is in your feed. There's a sure 20,000 International Units of Vitamin E per pound. The cost is only a few dimes per ton of feed.

There are at least seven tocopherols which have some vitamin E activity. The most effective biologically is "alpha." That's what is in *Myvamix Vitamin E Feed Supplement*. (Only 10 to 15% of the tocopherols in corn is "alpha"—the rest is "gamma," one of the least effective of all.)

The "acetate" means that the vitamin E in *Myvamix* is really stable. Tests show no loss of potency even after storage in finished feeds for six months at 100 F. The full potency you put in the feed is there when the feed is fed.

OUTLOOK

PROBLEMS AND OPPORTUNITIES IN FINANCING AGRICULTURE

"Many feed firms cannot invest in new plant and expansion because they have too much of their working capital tied up in accounts receivable, of which many are past due. Were this money due a bank, it would be paid on time, and if not, the banker would be collecting, not the salesman."

By Douglas F. Graves
Chicago National Bank

Opportunities and problems in financing agriculture involve four groups. There are (1) the suppliers of the goods and services which need financing and (2) the farm managers who are responsible for making the investments in goods and services pay. This leaves only (3) the bankers to furnish the money and (4) the farmers to borrow the money. And therein lies the problem. This problem is not a simple "you're right and I'm wrong" proposition; rather it is a somewhat complicated problem involving over-zealous salesmen, under-capitalized farmers, lazy farm managers and equally lazy bankers. I would like to point out some of the things all four of these groups are doing which are hindering the proper extension of credit to the farmer.

Douglas F. Graves

AUTHOR—Douglas F. Graves is assistant vice president of the Chicago (Ill.) National Bank. Since 1957, he has been with the commercial banking department of this bank, working with country banks and agricultural credit. He was reared on farms in Minnesota and Iowa, holds a B.S. degree in vocational agriculture from Iowa State College, and has done graduate work in agricultural economics at the same school. Mr. Graves served on the Iowa State College staff before moving to Chicago in 1949 to work for a bank. He managed or supervised the management of 40,000 acres of land in the Midwest, about 65% of which involved livestock operations. Mr. Graves has served two terms as chairman of the agricultural committee of the Illinois Bankers Assn., and is currently president of the Illinois Society of Farm Managers and Rural Appraisers.

Bankers have a definite influence on what suppliers sell and what the farm manager has to work with. You may rightly feel that it is the banker's job to lend money and not to make decisions regarding what is planted, produced and purchased by the farmer. However, the banker's position is dominant because the amount of money he can lend is limited relative to the demand for loans. Therefore, if he makes a loan for one purpose, he automatically limits the amount available for other purposes.

Agriculture is becoming increasingly dependent upon off-the-farm suppliers for many of the factors of production such as feed, fertilizer, machinery, equipment and buildings. The problem of the supplier of these goods and services, the farm manager and the banker is the same. It is the problem of getting these goods and services into the hands of the people who can put them to work at a profit.

Substitute Capital for Labor

Few if any industries have substituted capital for labor as effectively during the past 10 years as has agriculture. It is estimated that by 1960 the replacement of farm machinery will require an annual output equal to 95% of the industry's total output in 1952. This same potential increase in business can be quoted for feed, fertilizer and many other goods and services.

The problem is how can the new agriculture be financed? I am sure you will all agree that many of our bankers are more realistic today than they were a few years ago. Seldom, if ever, do you see 90-day notes

MIXERS' PULVERIZED OATS

THE GRIND THAT SOLVED THE PRICE AND QUALITY PROBLEM FOR HUNDREDS OF FORMULA FEED MANUFACTURERS JUST LIKE YOU!

You've got to hold down your costs, and still you have to maintain quality to beat competition. Well, let Fruen's Mixers' Pulverized Oats help you. Here's a product you'll be proud to mix into your formula feeds, and its low cost helps you to better profits. Mixers' Pulverized Oats is proof of our statement that "dollar for dollar you can't buy better oat products than Fruen's."

Mixers' Pulverized Oats is also available in coarse ground or custom ground to your exact specifications. Write for samples and prices.

MIXED CARS SHIPPED AT STRAIGHT CAR PRICES
Contact your broker or dealer

Millers TO THE TRADE

FRUEN MILLING COMPANY
MINNEAPOLIS 5, MINNESOTA

SEASON'S GREETINGS

AGRICULTURAL DIVISION, AMERICAN CYANAMID COMPANY

CYANAMID

OPPORTUNITIES FOR BANKS

Agriculture will need more outside capital than has been available in the past. These new opportunities for financing of agriculture are present at this time because:

(1) Farmers are becoming more specialized.

(2) The volume of business per farm has increased.

(3) An increasing amount of production cost is represented by an out-of-pocket expense.

(4) New technology has made present facilities and equipment obsolete.

which must be renewed several times before they can be paid. Today maturity dates coincide with the farmer's ability to pay. Also, many bankers have added technically trained agricultural specialists to supervise their agricultural credit. What has brought about this need for specialists in agricultural credit? Some may call it vertical integration. I prefer to call it just plain changes; however, this specialization on the farm is changing the old concept of credit. I would like to make several comments regarding these changes and the effect they are having on the credit needs of agriculture.

One change which will continue, and probably at an accelerated rate, is the increase in size of unit operated by each family. The successful livestock and poultry producers will continue to specialize, and the size of their operation will increase at a faster rate than will he size of the grain farmer's operation.

All this means agriculture is substituting capital for labor. The second change which we can expect is an increase in the number of both family and non-family incorporated farms. This is inevitable because of inheritance taxes and the increase in size of investment per farm. The large investment makes it necessary that farms be operated at maximum production and efficiency at all times if they are to show an acceptable return on the owner's capital. If the owner or operator is limited in working capital, the farm will be operated at something less than its optimum. These factors will tend to encourage corporate forms of farm ownership, with more farms being operated by tenants who have chosen to invest their resources in working capital rather than real estate.

Coordinated Programs

A third change we may see is that resulting from a coordinated program of marketing and processing. Today, groups are organizing for the purpose of controlling marketing. In the future, we may see a major portion of our eggs, poultry, hogs and to a lesser extent, cattle, delivered to a central assembly area where they will be graded and sold by the marketing association. The association may establish schedules for production and delivery along with specifications for quality control and contract prices for the items they handle. All this means larger units and the need for a larger amount of credit for physical plant development and operating capital.

Now to get down to the "meat" of this subject of financing agriculture. We have four groups involved in these changes: (1) the supplier; (2) the farmer; (3) the farm manager; (4) the banker. Let us take a look at each of these and see how they fit into this total picture:

THE SUPPLIERS OF GOODS AND SERVICES: They have done an excellent job of research and development and have provided the tools faster than even the farm managers have been willing to accept them, and much faster than the farmer and the banker have been willing to accept them. However, in their efforts to increase sales, many companies have carelessly extended large amounts of book credit to farmers. Much of this credit has been on a hit-and-miss basis. This has resulted in some farmers becoming over-extended and therefore unable to obtain credit from banks for operating capital.

The open account type of credit gets many farmers in trouble. Each salesman is interested in selling his product, with little or no regard as to how future payments can be made on this and other purchases. Some dealers take notes and discount them on a recourse basis at the banks. When there is no planned financial program, these dealers may be piling up a rather large contingent liability for themselves. If a customer is too poor a credit risk for a bank or one of the government credit agencies, it is questionable whether a feed dealer should assume this risk just for the sake of a sale.

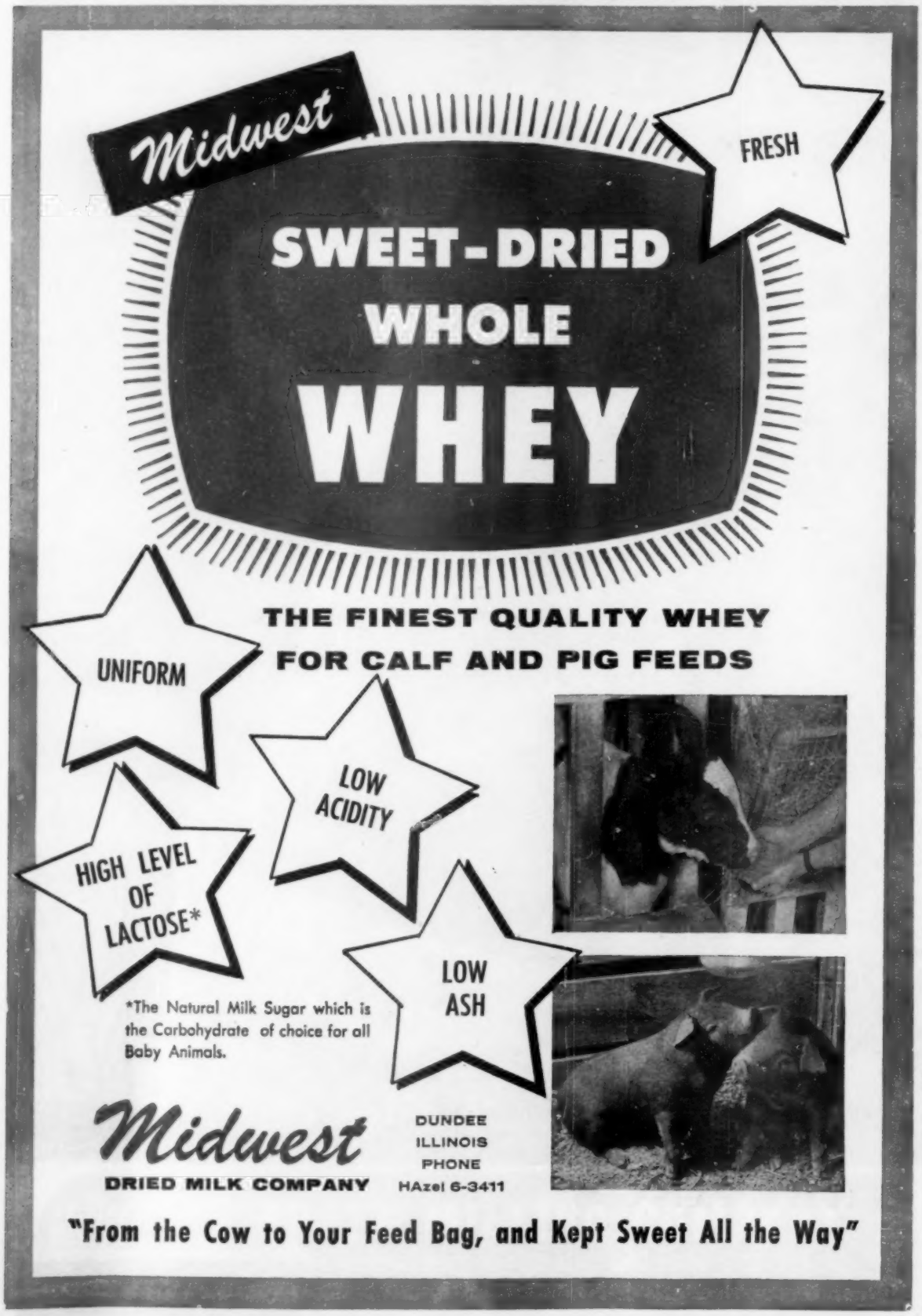
Many feed dealers have extended credit by taking mortgages on livestock. Often the value of the livestock far exceeds the amount owed for feed. Had this same amount of stock been mortgaged at the bank, the farmer would have been able to obtain cash discounts on his feed in addition to having extra operating capital.

The basic problem today with the dealer and the manufacturer is the same. They cannot invest in new plant and expansion because they have too much of their working capital tied up in accounts receivable, of which a great many are past due. Because a feed dealer's job is primarily one of selling, he lets many accounts go past due date because he doesn't want to get tough and perhaps lose a customer. Were this money due a bank, it would be paid on time, and if not, the banker would be collecting and not the salesman.

If a dealer or manufacturer wants to give additional service, there is an area in production and feed handling where the farmer needs help. It is difficult or impossible for the average farmer to get a "package deal" on the installation of an automatic feeding set-up. He must make a number of separate purchases, and the equipment or parts may not work together. As a result, many of the new feeding and production programs are only half right.

The farmer needs one-stop service for credit, and the bank has this service. He also needs a one-stop service for planning a feeding and production program, as there are none available.

THE FARMER: Farmers have never been taught to use bank credit. Because some farmers dislike the formality of signing notes, etc., at a bank, salesmen and merchants have extended them book credit. This has resulted in heavy carrying charges and loss of cash discounts for the



farmer. There is not a supplier today who could stay in business if he disregarded cash discounts as does the farmer. Farmers must know how and when to use credit, and the merchants and farm managers must help them to properly use this very important part of their business.

Farming has become big business, and farmers are going to have to act like businessmen. This means they are going to need records, not only of income and expenses, but rather an analysis of the various parts of their farming operations. Bankers want to know what they have done, how they have done it, and see the results; in other words, farmers are going to find it increasingly difficult to borrow large sums of money unless they are prepared to present a budget showing what is needed and how it can be repaid.

FARM MANAGERS: The need for professional farm managers is greater today than ever before. I believe that the future of the professional farm manager may be working with a tenant or owner-operator on a consulting basis, just as much as he does today with the absentee farm owner. However, for now, farm managers have a real job to do in helping farmers get the credit which is needed for today's agriculture. Farm managers are qualified to sit down with the owner and the tenant to work out a budget. This type of planning will help the manager convince the owner, the tenant, and the banker that the ideas he is presenting are sound.

BANKERS: Agriculture has changed more in the past five years than in the previous 25. As a result many bankers have found it difficult to keep abreast of these changes in addition to the changes in banking. This rapidly changing agriculture has resulted in some bankers' unwillingness to finance the application of this new technology. A number of bankers have kept abreast of these changes by adding a technically trained man to the staff. However, this solution has not always come up to expectations because bank management has continued to finance agriculture and extend credit on the same terms as they had in the past.

In areas where banks have failed to supply the full amount of credit needed, government sponsored credit agencies and industry have stepped in to supply the capital in the form of cash or credit for feed, fertilizer, equipment, etc. It is in these areas where contract farming has gained a foothold.

Today, many farmers need more credit than can be supplied by their local banks, and their banks in some cases are not helping them secure the additional credit. This situation exists because most city banks are not familiar with agriculture and have hesitated to help the country bank with the large lines of credit. This situation has caused some bankers to discourage farmers from expanding.

In industry and other business, it is an accepted practice to use bank credit from a few weeks to an entire year. Agriculture must develop a system of financing similar to industry which will permit farmers to use a revolving type of credit or an open-end mortgage for year-round financing. Farmers need a line of credit to draw on as it is needed to purchase feed, livestock, fertilizer, machinery, labor, etc.

If this is the type of credit needed to put the new technology to use, it will be furnished by someone, and if the local banker wants this business, he must be set up to handle it.

The following steps are suggested if these loans are to be made:

1. Technical advice must be available to the bank.

2. Bankers must maintain adequate credit files.

TECHNICAL ADVICE: A bank should have on its staff a man trained in technical agriculture and credit to develop and supervise the extension of this credit. If the bank does not have an agricultural expert on its staff, it should give consideration to using an independent professional farm manager on a consulting basis or asking for technical help from the city correspondent. Although not trained in credit, professional farm managers are qualified to develop budgets and farm plans which indicate what can be expected from any given program. From this the appropriate credit action can be determined.

FILES: Many bankers resent being told that their credit files are inadequate, incomplete and out-of-date. The reason given for the lack of information in these files is that they know the man and his operation. This answer was acceptable for the type of credit extended in the past, but it is impossible for even the trained technician to retain in his head the various plans, alternatives, and their results which are available to a farmer today. It is necessary that the bank have a record of a farmer's past and present operation. In other words, if these loans are to be made, they must be supported by a credit file which will show when and how they will be paid and whether it takes six weeks or six years for the final payment. This means the file must contain a yearly budget of what is to be produced and sold and the income and expense involved in this production as well as the family expense. It will also be necessary to show when to expect the various expenses, income and re-payments.

The file on many farmers will not need to contain as complete a budget as others, but for those needing intermediate term and revolving type loans, and those with no real estate, it will be necessary to have this information to prove that the money can be repaid out of earnings as planned.

REASONS FOR LAG

The movement of new capital into agriculture is slowed because:

(1) Farmers do not know how to use credit.

(2) Bankers are unfamiliar with the "new look" in agriculture and the types of credit needed.

(3) Merchants and salesmen have not helped or encouraged farmers to develop a financial program.

(4) The budget approach to farm planning is not used when and where it is needed.

Appearance may be improved through better design, sharper color printing, reproportioning, or better choice of outside wall.

A frank discussion with us may result in a more attractive bag, reduced production costs and increased sales of your product.

When will you talk with our representative?

The Newest **KRAFTPACKER**

will handle any free-flowing material f-a-s-t-e-r, with more accuracy, than any bag filling machine of its type!

KRAFT BAG CORPORATION

Gilman Paper Company Subsidiary

630 Fifth Avenue, New York 20, N. Y.
Daily News Bldg., Chicago 6, Ill.

Integrated mills at St. Marys, Georgia and Gilman, Vermont

Gilman PAPER CO.

☐ We are interested in improving our bag.
☐ We are interested in your Kraftpacker.

NAME OF COMPANY_____

ADDRESS_____

CITY_____ ZONE____ STATE_____ PRINCIPAL_____

PRODUCT MFD._____

OUTLOOK

Feed Manufacturing Industry—Today and Tomorrow

- *Current Size and Competition in the Industry*
- *Estimates of Tonnage Growth in the Years Ahead*
- *The Development of Contract Agriculture*

By Oakley Ray
American Feed Manufacturers Assn.

"The Feed Manufacturing Industry—Today and Tomorrow" is written to give you some of the author's first impressions after spending a few months getting acquainted with the industry and its people.

This article will not attempt to cover all trends that are taking place. It will discuss a few statistics on current size and competition, some thoughts on "tomorrow's" feed tonnage and will spend some time considering the important development of contract agriculture.

TODAY

Industry Highly Competitive: One outstanding characteristic of the feed industry today is the large number of companies and the great amount of competition which exists. The Bureau of the Census reported that there were 1,918 feed manufacturing plants in the U.S. in 1956. This did not include small businesses with total shipments of $20,000 or less. It also did not include feed mixing businesses whose primary activity was something other than feed manufacturing—such businesses as grain elevators, farm supply stores, etc. Some estimates have placed the total number of businesses doing some feed manufacturing at more than 5,000.

A U.S. Senate subcommittee on anti-trust and monopoly reported in 1957 that the four largest feed manufacturers produced only 21% of the output of the industry with the eight largest companies producing only 29%. (See Table 1). This represents much less concentration than many of the industries studied, as indicated by the table.

It is much easier to enter the feed manufacturing industry than many other industries. Capital requirements are substantial, but are minor compared with industries such as automobile manufacturing and steel.

Efficiencies of scale can be reached at a small size compared to many industries. Most of the plants now being built are smaller than those built in earlier years. In many areas small local firms are able to compete successfully with regional and national companies. It appears this will continue.

A Large Industry: Feed manufacturing is a large industry from the standpoint of the value of product, which was estimated by the Census Bureau to be $2.7 billion in 1954. The total number of employees was reported to be 60,000.

36 Million Tons in 1957: The 1957 industry tonnage as estimated from the AFMA monthly feed production reports was 36 million tons. Poultry feed other than for broilers and turkeys accounted for 33% of the total, followed by broiler feed (20%) and dairy feed (18%). (See Table 2). All types of poultry feed combined accounted for about 60% of the total. (Figure 1.)

Nutrition Research Doubles in Six Years: One item which seems impressive to me is the tremendous amount of nutrition research which is carried on by the industry. A recent survey by the AFMA Nutrition Council indicated that the 74 reporting companies were using a total of more than 3.8 million head of birds and other animals per year for research purposes. This was more than twice as many as a similar study indicated only six years before. The survey indicated the following numbers are now being used for research each year by the 74 companies:

	Thousand Head
Broilers	3,188
Turkeys	318
Layers	223
Other Poultry	76
Swine	34
Beef Cattle	9
Sheep & Lambs	6
Dairy Cattle	3
Total	3,857

The survey indicated that the av-

Oakley Ray

AUTHOR—As director of market research for the American Feed Manufacturers Assn., Oakley Ray handles all economic and market research activities of the association, interpreting economic facts for release to members, and also coordinates all current AFMA market research activities of the poultry survey committee, the feed survey committee and the statistical analysis program. Mr. Ray was reared on a farm at Vincennes, Ind., and is an agricultural economics graduate of Purdue University. During 1951-52 he served as a graduate research and teaching assistant while earning his M.S. degree at Purdue. He has attended the University of Chicago, and has worked as an extension economist at Purdue, including editing two monthly publications, Economic & Marketing Information for Indiana Farmers, and Indiana Farm Price Sheet. Before joining AFMA he was assistant director, department of marketing, American Meat Institute, Chicago. He has prepared and presented outlook reports for four AMI commodity committees.

TABLE 1. Percentage of value of 1954 industry shipments accounted for by:

Industry	4 Largest Companies	8 Largest Companies
Feed Manufacturing	21%	29%
Poultry Dressing Plants	17	23
Petroleum Refining	33	56
Fertilizer	36	59
Meat Packing	39	51
Steel Works & Rolling Mills	54	70
Motor Vehicles & Parts	75	80
Cigarettes	82	99

FIGURE 1. Breakdown of manufactured feed by class of livestock and poultry, AFMA production report, 1957.

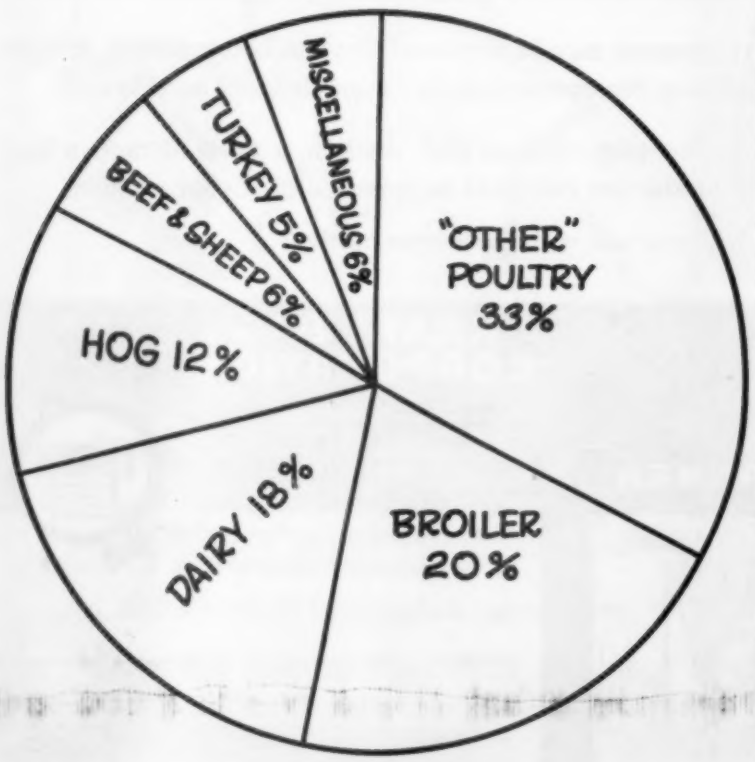
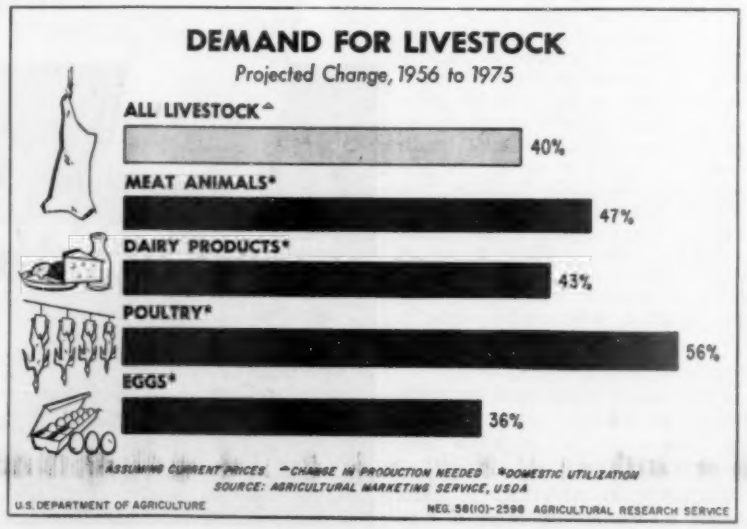


FIGURE 2



erage nutrition director had attended two colleges, earned 2¼ degrees, spent more than six years in college teaching, research or extension work, and had more than 14 years of feed industry experience. He conducted an average of 152 feeding tests per year which required a total of 53,000 birds and animals.

TOMORROW

Feed Volume Increasing: One reason for industry optimism is the increasing volume of feed production and indications of continued increases.

The U.S. population is now about 175 million and census forecasts for 1975 range from 216 to 244 million. The mid-point of the two estimates would represent an increase of more than 30% from 1958.

More Animal Products Per Person: There is, of course, a continuing trend towards eating more animal products per person. The trend is expected to continue, and this means increased feeding to produce more animal products.

The U.S. Department of Agriculture has estimated that U.S. consumers will require a total production of livestock and poultry in 1975 40% above the 1956 level. (See Figure 2.) The estimated increases required vary from a high of 56% for poultry meat to a low 36% for eggs.

Manufactured Feed Increasing Percentage of All Feed: Another indication of increased future production of manufactured feed is the trend toward manufactured feed accounting for an increasing proportion of total feed. AFMA estimates of total feed manufactured account for 25-27% of the USDA estimates of all concentrates fed to livestock during the 1955-57 period, compared with only 21-23% during 1948-50. This is a substantial increase. Some degree of increase is expected to continue with the trends toward larger and more specialized production units, confinement feeding, lower cost feed handling with bulk equipment, closer working relationship between the feed industry and producers, etc.

Less Feed Required Per Unit Produced: Another development which complicates the translation of the added amount of livestock and poultry needed in 1975 into a forecast of the increase needed in feed production is the continuing increase in production per pound of feed. This has been especially important for broiler feed where USDA estimates feed efficiency increased 38% between the 1939-41 period and 1957.

USDA also estimates that broiler feed efficiency will continue to increase faster than most other feeds, with an expected 28% improvement between 1957 and 1975. It is expected that the pounds of feed required per pound of broiler gain will decrease to a U.S. average of 2.2 lb. in 1975 compared with 3 lb. in 1957 and 4.9 lb. for the 1939-41 period. (See Table 2.)

This, of course, does not mean that 28% more broiler feed could be sold by 1975 if there were no further improvement in broiler feed efficiency. An improvement in feed efficiency makes it possible to sell the final product to consumers at a lower price, and they ordinarily respond by consuming more of the product.

Feed Production in 1975: AFMA estimates of industry production of manufactured feed indicate an increase of 41% during the 1948-1957 period. A continuation of this rate of increase would lead to an industry total of around 70 million tons in 1975, which would be an increase of more than 90% above the 36 million tons of 1957. If 1958 were considered, the 1975 estimate would be even higher. Feed production in 1958 is up sharply, perhaps as much as 10% above 1957.

Another approach to a simple estimate of future feed manufacturing is to consider what percentage manufactured feed might be of total feed in 1975, and to compare this with total feed needed.

A direct extension of the 1948-1957 trend in the proportion of manufactured feed would lead to a forecast of manufactured feed accounting for 35-40% of all concentrates fed in 1975. Using 37% manufactured feed plus the USDA estimate of 180 million tons of feed concentrates needed in 1975 gives an estimate of 67 million tons of manufactured feed in 1975, more than an 85% increase above 1957 production.

TABLE 2. Pounds of feed required per pound of products, U.S. Average[1]

	1939-41	1957	1975[2]
Broilers	4.9 lb.	3.0 lb.	2.2 lb.
Hogs	5.2	5.3	4.5
Cattle	9.9	9.6	8.8
Milk	1.1	1.0	0.9

[1]Source: U.S. Department of Agriculture
[2]USDA Forecast

I. S. Riggs, chairman of the AFMA board of directors and vice president of the Quaker Oats Co., Chicago, predicted at an August meeting of the Central Retail Feed Assn. that the volume of manufactured feed will expand 50 to 80% from current levels by 1975. Ray E. Rowland, president of the Ralston Purina Co., St. Louis, predicted at an August meeting of the American Soybean Assn. that a 70-million-ton annual output of manufactured feed would be reached by 1975. This would be an increase of more than 75% above current levels. Ezra Taft Benson, secretary of agriculture, predicted at last fall's Corn Picking Contest that the demand for feed may be up 50% by 1975.

Thus, there appears to be widespread agreement that feed production is likely to increase substantially. No one can say exactly how much, but the important point is that there will be a definite upward trend, and the industry will continue to expand.

CONTRACT AGRICULTURE

Future developments in contract agriculture will have much to do with shaping the tomorrow of the feed industry. The USDA estimates that

Mix high-profit feeds
IN ONE OPERATION
WITH
Gorton's
BLENDS

AL-FISH BLEND
LAYER BLEND
MAR-VI-TIC BLEND
TURKEY BLEND

PUT LIFE IN YOUR LIVESTOCK FEED with
New Englander VITALIZER
Vitalizer helps guard dairy cows, calves, beef cattle, and sheep against variations in roughage. Colorful advertising in leading farm publications is telling your customers about Vitalizer's unique advantages. Write today for full details.

Replace many ingredients with one COMPLETE Blend!

Each of these New Englander products can completely fortify the feeds you mix. Ocean-Fresh fishery products and other farm-proven ingredients give these Blends every essential vitamin, the highest quality protein, and a full measure of unknown growth factors—everything your feeds need to boost egg production and hatchability, to produce maximum feed efficiency in broilers and turkeys. The uniformity and potency of these complete Blends are guaranteed. You save money, to say nothing of mixing time and inventory space. So what are you waiting for? Drop a card to our distributor nearest you or write us direct for full details.

Also ask about
Fish Meals • Condensed Fish Solubles • Dried Potato Pulp • Vitamin Oils • Richpelt ocean-fresh Frozen Fish • Whale Meat • B.H.T. • Southern Sunshine Poultry Litter.

NEW ENGLANDER PRODUCTS
are distributed by

O. A. Newton & Son Co.
Bridgeville, Delaware
Phone 2551

G. Dan Enterline, Jr.
Dover, Delaware
Phone 2115

H. Mark McNeal Co.
1207 Liberty Life Bldg.
Charlotte 2, N. C.
Phone: Franklin 7-1522

L. E. "Robbie" Robertson
P.O. Box 691
Binghamton, N.Y.
Phone: Binghamton 2-7152

Smith Grain Co.
Limestone, Tennessee
Phone 2660

Parnell Grain Co.
Parkton, N.C.
Phone: Ulysses 8-3354

Holly Farms Poultry Co.
Wilkesboro, N.C.
Phone 1600

Henry E. Kraus
2526 Longview Ave., S.W.
Roanoke, Virginia
Phone: Diamond 2-4802

Herbert Clift
472 South Mason St.
Harrisonburg, Va.
Phone: Harrisonburg 4-4848

Cooperative Feed Dealers, Inc.
P.O. Box 431
Binghamton, N.Y.
Phone: Binghamton 3-3521

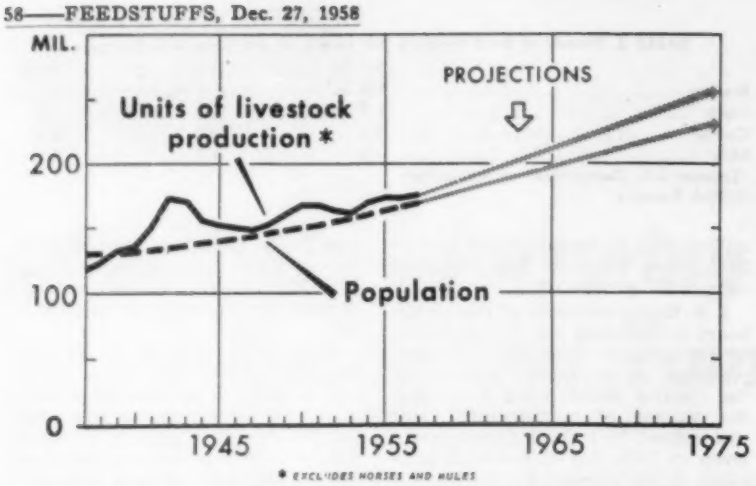
J. Kenneth Blackstone
RD #1
Caribou, Maine
Phone: Caribou 2-0032

Paul M. Hoyt
319 Clark St.
Clinton, Mich.
Phone: Gladstone 6-4118

L. J. Barrett Co.
Box 505
Clinton, N.J.
Phone: Clinton 451

NEW ENGLAND BY-PRODUCTS CORP.
177 Milk Street • Boston 9, Mass. • Hubbard 2-4632

REMEMBER
TO ORDER
CHASE BAGS
There's None Better!



PROJECTED LIVESTOCK PRODUCTION—A long-run aspect of the feed grain-livestock situation is indicated by this chart. It shows that livestock production over the next several years is likely to increase more than population. Continued increases in consumer income would allow the growing population to consume more livestock products per person than currently.

95% of all U.S. broiler production is now under contract, 50% of the turkeys, less than 5% of the eggs, 30% of the milk and less than 2% of the hogs.

Participation May Be Necessary: This is not the place for a detailed discussion of the reasons for the development of contract agriculture. The important point is that contract agriculture is important in some areas and is increasing. All companies and individuals in all phases of production and marketing should consider contract agriculture to see how it affects their business.

When it appear that a contractual program can provide an improved system of production and marketing for a given commodity in a given area, some company or individual will take the lead in developing a program to try to take advantage of the possibilities. If the "pioneer" program proves to be more efficient than traditional operations, competition forces other companies and individuals to participate in similar programs or face the loss of their market. This applies to feed companies and dealers just as much as to producers. Some companies in broiler areas have lost most of their feed market after they decided not to change traditional methods of operation.

May Increase and Stabilize Company's Market for Feed: The main advantage of contractual arrangements from the standpoint of companies and dealers in the feed industry is the possibility of increased volume with some assurance of maintaining that volume for some specified period of time. Most contractual production operations are large, so each offers an important outlet for all production supplies, including feed.

Capital Requirement a Major Problem: One of the important effects of the type of integration we have seen in much of agriculture is the additional investment of substantial amounts of capital by the contractor. The contractor has sometimes been the feed manufacturer or dealer.

In my opinion, it is time for each company to take a long look at present and prospective operations and to make a basic decision whether it is necessary to become permanently involved in such financing. If most agriculture production should some day be produced under contract, and if the contractors should provide capital for most of the direct production costs, the amount of capital which has been invested in the broiler business would be only a small portion of total requirements.

We will not, of course, have universal contract agriculture in the foreseeable future, but the trend is in that direction. Regardless of the amount of contract agriculture, the accumulation of enough capital for an economic sized farm unit will become a greater and greater problem.

The 1954 Census reported the average investment per commercial farm in the U.S. was more than $30,000, and the USDA estimates this will more than double by 1975. Dr. M. G. Smith of Ohio State University reported a recent survey of 16 farmers of one Ohio county whose investment varied from a low of $55,000 to a high of $190,000. He predicted that many Ohio farms would have a total capital investment of a quarter of a million dollars by 1970-75.

The elimination of the provision of large amounts of capital by the contractor would not necessarily mean that some type of contractual arrangement could not be developed. Some companies have found conventional credit agencies willing to finance when the contractual programs appeared to be sound, and when the credit agency had a thorough understanding of the complete program. If capital requirements can be handled through conventional credit sources, this will take one burden off the contractor's shoulders and permit him to spend more time doing a good job performing his primary function.

Production Risk Shifted to Contractor: Another important effect of many of the contracts has been to shift much of the production risk from the producer to the contractor. The broiler grower who produces for a given amount per pound may have the same income with the recent 13-16¢ prices that he had with the 20¢ prices of the first quarter of the year.

Again, this is an area where companies in the feed industry should make a basic decision as to whether it is necessary to become permanently involved. If the answer is no, it is likely to be less painful to refrain from becoming involved, rather than to take part and then to decide later that it is necessary to retrench.

At any rate, company executives who develop new contractual arrangements where they assume much of the production risk should give full consideration to possible production losses as well as possible profits. Those who are considering hog programs for example, should give as much consideration to the $11 hogs of the fall of 1955 as the $20 prices that existed during much of 1958. Conditions in 1960, when we may be near the peak of the hog production cycle, may be more like 1955 than 1958.

May Increase Output in Short-Run: Another problem that may occur with any commodity in which contract operations develop rapidly is increased production. This may not occur over the long-run, but is likely during the first few years if the programs follow the current pattern, including the introduction of new capital. As a result, some new producers enter the industry and others increase the size of present operations. The resulting increase in output would not likely be as great for an established commodity such as eggs or hogs as the increases we have seen in broilers. Broilers represented the development of a new industry to a considerable extent.

However, consumer demand for eggs is such that a small percentage increase in supply would likely result in a decrease in the price of eggs of much larger proportions. The same type of reaction might be expected for pork though perhaps to a lesser extent.

Therefore, if contracts should develop rapidly for eggs and hogs, the result might be a very low level of prices in the short-run. This would force the least efficient producers out of production rapidly and might lower prices to the point where operations would be unprofitable for all for a short period. This could happen even though the contractual arrangements were more efficient than the traditional method of production and marketing, and thus were desirable from the standpoint of the economy as a whole.

Industry Must Keep Informed: No one can foresee exactly what changes the future will bring to the structure of agricultural production and marketing. It appears that contracts are going to become more important, but no one knows how far contract agriculture will go or exactly what turn it will take.

The feed industry will be directly affected regardless of what the future brings. If contract agriculture continues to develop, those companies who do not participate will lose much of their market for feed. If, on the other hand, companies venture into unsound contractual arrangements, those who have gone the farthest out on the limb may have the largest losses.

CONCLUSION

It is obvious that tomorrow's agriculture will be composed of a smaller number of larger farm production units. The basic organizational structure of production and marketing may be substantially changed.

Feed manufacturing may change drastically over the years but is not going out of style. There will be an industry tomorrow and that industry will be substantially larger than today.

The future of the industry appears bright—for companies who study new developments carefully and stand ready to adjust operations accordingly. Some adjustments will have to be the result of trial and error, but the company executives who keep informed will make fewer mistakes than those who do not.

Ohio Firm to Handle Morea Supplement

NEW YORK—Flo-lizer Feed Service, Inc., Kingston, Ohio, has been appointed a mixer-distributor of Morea liquid supplement for ruminant animals, it has been announced by U.S. Industrial Chemicals Co., division of National Distillers & Chemical Corp., New York.

The Ohio company is the first mixer-distributor named in Ohio, according to Dr. H. J. Prebluda, manager of U.S.I. special products sales. He said U.S.I. expects to appoint other mixer-distributors throughout its marketing areas during the coming months.

U.S.I. has an exclusive license from Feed Service Corp., Crete, Neb., to market Morea liquid premix in most states east of the Mississippi River and west of the Continental Divide. Feed Service Corp. markets Morea premix in the Midwest.

Local mixer-distributors such as Flo-lizer Feed Service blend the liquid premix with molasses and sell the finished product.

GRAIN FIRM CHARTERED

TOPEKA, KANSAS—West Plains Grain, Inc., Scott City, Kansas, has been granted a charter of general warehousing and grain storage business. Keith Elmore has been named resident agent. Capitalization of $100,000 was authorized.

the new name in dehydrated alfalfa
MIDWEST
GREEN BANNER
DEHY
midwest alfalfa
KANSAS CITY 41, MISSOURI
P.O. Box 534 • HArrison 1-0732

Give a chicken her choice

AND SHE'LL CHOOSE PACO CONDITIONED FEED

Paco Treated Feed (magnified)

Untreated Feed (magnified)

PACO makes the difference

- IMPROVES FEED TEXTURE
- HELPS ELIMINATE DUST
- IMPROVES PALATABILITY
- REDUCES FEEDING WASTE
- NO RANCIDITY PROBLEM

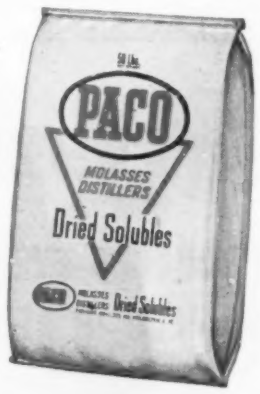
PACO Molasses Distillers Dried Solubles

provides a most economical and easy method of improving the physical properties of your feeds. As Paco comes to you in moisture-resistant paper bags, it is practically bone dry and consists of tiny thin flakes that mix readily with other feed ingredients. When mixed with feeds of normal moisture content, these Paco particles attract moisture, causing the dust and fines to adhere to them. This results in a finished feed of improved texture.

A highly nutritious feed ingredient in itself—Paco supplies vitamins, trace minerals and unidentified growth factors. Its cost is surprisingly low.

Available for immediate or deferred shipments.

WRITE FOR A FREE TESTING SAMPLE TODAY



PACO MOLASSES DISTILLERS DRIED SOLUBLES

A PRODUCT OF
PUBLICKER INDUSTRIES INC.
ANIMAL FEED SALES DEPARTMENT
1429 WALNUT ST., PHILADELPHIA 2, PA.
PUBLICKER ALCOHOL & CHEMICAL SALES CORPORATION
101 ARSENAL ST. • ST. LOUIS, MISSOURI • PROSPECT 6-0858

MIDWEST SALES AGENT—The North American Trading and Import Co., 101 Arsenal St., St. Louis, Mo. Tel.: PRospect 6-0858
SHIPMENTS FROM PHILADELPHIA, PA., AND GRETNA, LA.

OUTLOOK

Building Management for Tomorrow

A business does not seize opportunity or make mistakes, but people do. . . . Technical knowledge is available today for all concerned, but growth and financial success in the future will depend on good management—on selection and development of capable management personnel.

By James H. Burrell
James H. Burrell & Co., Inc.

Feed manufacturers are confronted from time to time with the problem of vacancies in management, or the growth of a business has advanced to the point where new management must be added.

In certain cases, previous planning has been omitted or overlooked until the need actually becomes quite serious, and in some companies, the selection of a capable man has been rushed into—then to learn later that a mistake has been made.

The American feed industry rates among the top 10 industries in the U.S., and with the continued growth of the industry, the requirements for presidents, vice presidents, general managers and efficient staffs become more serious year after year.

In the past, management has assumed that if a man had been with a company for five, ten, or fifteen years, holding two or three positions during that time, he might qualify for a managing position and later be recognized as a man who could qualify for an important executive assignment. The results of many such promotions have proven false many times in recent years.

Men in managing positions throughout the industry are generally responsible for selecting and hiring people, but oftentimes they do not realize what it costs to make a mistake in hiring the wrong person; neither do they recognize the cost of dismissing one of their mistakes, and in many cases, the cost of dismissing a man is greater than the original cost of hiring him.

Many times an excellent salesman is selected from the ranks and promoted directly into sales management—unfortunately later the company learns that it lost an excellent salesman but did not gain a capable manager.

Anyone can improve his opinion on employee performance by thinking through carefully how well a person performs each element of his present position, and a smart department manager will list the critical requirements of that position in the order of importance and he can then later rate a man in the terms of how well he performs and corrects problems of a critical nature. This kind of a procedure can assist top management greatly in analyzing recommendations of a person recommended to them for advancement.

Collect Information

There is always a hazard in rating people, and one should be aware of fixed formulas for such ratings, but should collect pertinent information and data on such points as:

1. Profits of department and the reasons.
2. Cost of the operation.
3. Efficient handling of budgets.
4. Cooperation with people in a department.
5. Cooperation with people in all departments.
6. Judgment.
7. Follow-up.

Beware of influence from others; compare results of other departments; discuss rating with persons being rated; do not look for easy, pleasing answers; and see that each department has a program.

Management Responsibilities

A good manager must know all products, what they are for and how to use them.

Sales management must know all dealers and should know a group of feeders around each dealer point. Other departments in the organization should also have first hand information about dealers and how they operate their business.

Sales management should know the leading open markets and the potential tonnage in each territory.

All management must be honest and deal with facts; they must be careful about making promises and must not exaggerate. All departments must be fully aware that orders must be sold at a profit, and the heads of all departments must watch the health and the conduct of their people, and see that they are on the job and that they are not wasting valuable time.

Competition is now on parade with more gadgets and new ideas than have ever been seen before. During the past few years, credit has been used as a sales tool instead of the application of sales ability, until today there are various companies struggling under the load of credit because they have placed their working capital in the hands of other people.

Top management is well aware of the fact that each and every department must reconsider their plan of attack on production, products, new processes, new products, research, development, organization and management. No matter how efficient an organization may be, it can be better and more productive.

The feed manufacturer is confront-

James H. Burrell

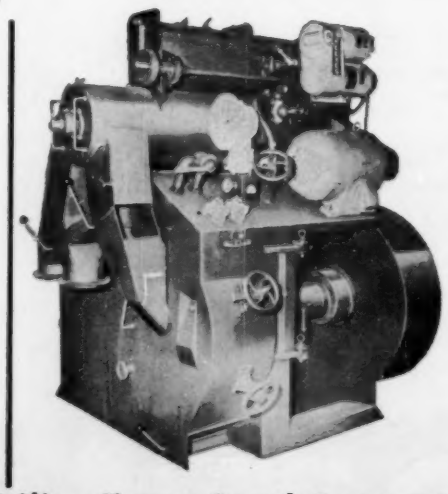
AUTHOR—James H. Burrell is president of James H. Burrell & Co., Inc., business management consultant, St. Louis. He has devoted the past 35 years to various phases of business management. For years he managed various departments of Ralston Purina Co., St. Louis. While with Purina, he conducted studies of many national industries to find new methods and new products which could be used in the manufacture of commercial feeds, including fruits, fish, soybeans, molasses, alfalfa, vitamins, amino acids and others. After resigning from Ralston Purina he organized James H. Burrell & Co., Inc., which now serves clients in various types of industry, specializing in analysis, production, sales, nutrition, personnel and other services to the feed industry. Mr. Burrell has written many papers for industrial, agricultural and commercial organizations, and has appeared many times as a speaker before college and industrial groups. He took an active part in organizing the Midwest Feed Manufacturers Assn. Production School, and has been active in conducting these schools during the past nine years.

Wenger Multi-Duty PELLET MILL

PRODUCES EVERY MAJOR TYPE OF FEED IN DEMAND TODAY

- *Hard Pellets (with or without Liquids)*
- *Wenger Blended Mash Feeds (1 or 2 Liquids)*
- *Hi-Molasses Pellets (Optional)*

The Wenger Multi-Duty Means Maximum Flexibility for the Medium Sized Mill to Produce Top Quality Feeds of Every Type, With Major Savings in Initial Equipment Costs, Electrical Components Costs, and Installation Costs. Wenger Engineered for Years of Heavy Duty Operation.



Minimum Investment Plus Maximum Utility Means Sound Economy

Wenger Mixer Mfg. Co.
SABETHA, KANSAS · PHONE 111

Standard of the Industry for Liquid Feed Mixing, Pelleting and Cooling Equipment.

KEEP POSTED with
FEED FLASHES & FORECASTS

Know what's ahead in the fast changing Feed Industry. Get twice every month (1) FEED FLASHES & FORECASTS, a fact-packed summary of Feed Trade News (2) SALES IDEAS, a goldmine of selling helps (3) FEED MARKET REVIEW of USDA Market Reports. For Free Trial write to TOBIAS ENTERPRISES, 326 N. Michigan Ave., Chicago

Write for...

2 MONTHS FREE TRIAL

ed today with many problems, such as:

1. Producing better products at lower cost per ton.
2. More efficiency in plant personnel and equipment.
3. Plan larger and longer runs for each feed to be manufactured.
4. Eliminate excess personnel throughout the company.
5. More efficient purchase of top quality ingredients.
6. Greater and more careful attention given to traffic rules, regulations and delivery of finished feeds from the mill to the dealer or feeder.
7. Know the economy of handling the business in the area to be served.
8. Eliminate long costly truck deliveries, which sometimes prevent making a profit on the order delivered.
9. Make plant improvements as needed to prevent waste, improve efficiency and service at lower costs.
10. Establish time-table production runs each afternoon for the following day.
11. Establish cost systems on—
    - Direct labor.
    - Indirect labor.
    - Operating costs.
    - Indirect expense.
    - Selling expense.
    - Advertising expense.
    - Administrative and general expenses.
    - Laboratory expense.
    - Elevator expense.
    - Warehousing expense.

Market studies are necessary to determine the potentials of all markets, whether they are open or served to enable management to decide if such markets can produce profitable tonnage.

Do not waste advertising dollars in an attempt to overcome manpower weaknesses in the sales department. It rarely works out on a profitable basis for the company.

All of the above are management responsibilities and will be changed by management, as needed, when they know all costs involved in operating the company.

Characteristics of Good Managers

1. A good executive will tackle one job or problem at a time. Devote to it whatever time is necessary to complete it before taking up the next one. He will avoid snap decisions when faced with "yes" or "no" decisions being required by a certain time. The answer in many cases should be "no."
2. A good manager will use new ideas, new tools, new methods, as soon as their merits have been reasonably demonstrated.
3. A good manager will always make instructions definite and specific; he will put instructions in writing to those intended, as well as for his own use as reference and follow-up.
4. A good executive will always make provisions for proper reserves, and taxes, and share the earnings as equitably as possible with stockholders, and with employees in the form of salaries and bonuses, and with customers in the form of superior products at lower cost.
5. A good manager must be intelligent; he must think clearly and concisely about his business and its problems. Making decisions is a part of his intellectual ability; he makes up his mind; he acts, because his decisions are based on judgment and experience after all the facts are discovered and studied.
6. A good executive realizes the importance of people to him and his business; he is very alert and sensitive to what makes individuals tick; their desires; their motives; their ambitions. The example he sets, the men under him will follow.
7. A good executive accepts responsibilities; he stretches them to include the welfare of his employees and his community. He acquires a reputation of dependability which he wants to live up to.

Smaller Companies

A business does not seize opportunity or make mistakes, but people do. In concerns of all sizes, people more than any other single factor are the key to success or failure. In a smaller size business, each executive is usually more important, proportionately speaking, than an executive in a larger corporation.

In smaller companies, the individual executive generally has a broader influence on the course of the company as a whole than the big company man can exert on his enterprise. The smaller company executive oftentimes heads up several divisions of the company while in a large corporation, an executive is generally in charge of one.

The facts are that the owners of smaller companies are the ones that need the most help, in selecting and holding the kind of executives that their company needs for the future.

The reasons, of course, vary from one company to another, but two factors seem to occur time and again: (1) Many of the owners of small companies fail to recognize their deficiencies in the selection and development of managing personnel; and (2) many do not know how, even when they want to.

The results are that many of the smaller companies in this country are

INFORMED SALESMEN . . .

. . . are the only ones able to sell to modern, large scale animal agriculturalists. Let us help you keep your men abreast of the times with technical sales training courses and lectures.

MANAGEMENT CONSULTATION, EVALUATION, FORMULATION

PHONE: CHapel 2-1091

agricon

S. H. MORRISON, Ph.D., D.V.M. Director

515 Woodlands Drive Clinton, Iowa

ADVERTISING CAPS for . . . the Most in Publicity and Good Will

Write Us for Samples and Prices

MINNESOTA SPECIALTY CO., INC.

121 N. 4th St., Minneapolis, 1, Minn.

Hoffman

for complete nutritional service

Hoffman-Taff Inc.

SPRINGFIELD, MISSOURI

BLACKSTRAP MOLASSES

ANIMAL FEED SUGAR

Olavarria & Co., Inc.

79 Pine Street

New York 5, New York

MOLASSES TERMINALS
New Orleans, La.
Paulsboro, N.J.

TELEPHONE:
WHitehall 3-6930
TWX: NY 1-4409

HI-SEAS

stabilized

MENHADEN FISH MEAL

and

MENHADEN WHOLE MEAL

(with fish solubles)

FIRST with . . .

GUARANTEED ANALYSIS

(of over-all Protein Digestibility and Amino Acids)

EXCLUSIVE ANTI-OXIDANT PROCESS

HIGHEST METABOLIZABLE ENERGY VALUES

write for full details to:

HAYNIE MENHADEN PRODUCTS INC.

WILDWOOD, N. J.

HI-SEAS

PURE REEF OYSTER SHELL IS RECOGNIZED BY THE POULTRY INDUSTRY TO BE THE BEST SOURCE OF CALCIUM FOR POULTRY. THROUGH ITS USE THE POULTRYMAN OBTAINS...

- INCREASED EGG PRODUCTION
- IMPROVED EGG QUALITY
- BETTER SHELL QUALITY
- HIGHER HATCHABILITY
- HEALTHIER POULTRY

You should have the Best in Oyster Shell. Samples of Snow Flake brand furnished upon request.

Phone OR 2-9441

WRITE WIRE PHONE

MAYO SHELL CORP.

P. O. BOX 784 • HOUSTON, TEXAS

CARGILL

Cargill CREATIVE PROCESSING

CREATIVE PROCESSORS OF FARM PRODUCTS

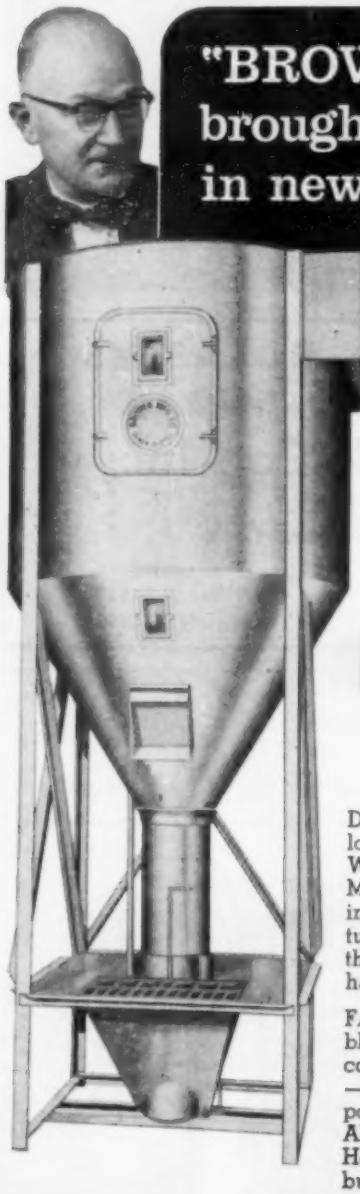
TRADE MARK REG.

VITA-GEE

A LIVE YEAST CULTURE — for 4-footed animals and poultry. Supplies all known B Complex Vitamins including B_{12} plus other nutritional factors. Easy to add to any formula.

Write or Wire for sample and prices.

ZELLERS' LABORATORIES READING, PA.



"BROWER MIXER brought 25% increase in new customers"

Says M. A. Anderson, Anderson Grain Co., Nacogdoches, Texas

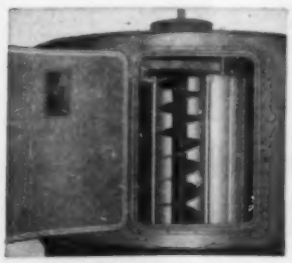
Increased profits, too!

"Mixing our own brand of feeds with a Brower Mixer has meant a 10% increase in profits, and our custom mixing service has brought a 25% increase in new customers. We also save on feed costs by mixing feed for our own 50,000 broilers. We have had a Brower Mixer for 15 years, and it is tops in trouble-free service and economy of operation."

BROWER *Whirlwind* MIXER

Dependability, fast mixing action, and low cost operation make Brower the WORLD'S LARGEST SELLING MIXER! Brower action WHIRLS the ingredients instead of just stirring or tumbling them . . . produces the most thorough mix you can get. Every sack has the same even mixture.

FAST and ECONOMICAL—a perfect blend in about 10 minutes at a power cost of only 3¢ to 5¢ a ton. Five sizes —700, 1200, 2000, 3000 and 4000 pounds-per-batch mixing capacities. Above-floor and below-floor models. Heavy welded steel construction—built for years of trouble-free service.



Interior readily accessible through large hinged service door and hinged conveyor sleeve.

Notice the mixing paddle at top which WHIRLS the ingredients for the most thorough mix.

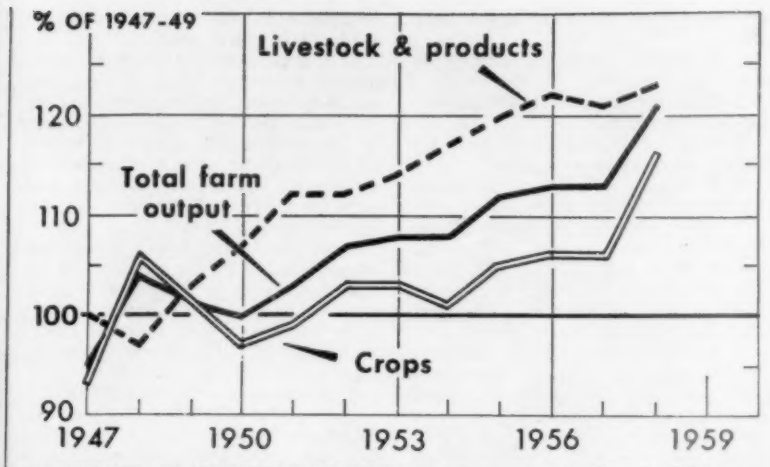
Glass observation window at eye level provides easy inspection of mixed feed at any time.

WRITE for FREE CATALOG

BROWER MFG. CO.

402 N. 3rd, Quincy, Ill.

World's Largest Selling Mixer



LIVESTOCK PRODUCTION CLIMBS—Total crop production in 1958 rose a tenth above 1957 despite the smallest harvested acreage in 40 years. Output of livestock and livestock products also increased as hog and broiler production rose. High production is likely again next year. Hog and poultry production is increasing, and cattle and sheep numbers are rising. Large output of crops also is probable, barring severe drouth. Even if weather in 1959 is less favorable than this year, continuing improvements in technology are likely to keep yields high.

losing ground just at the time when general business points to stiffening competition for the future.

Finding Good Management

Finding the right management is a problem all businessmen live with, whether they are large or small. Industry in all classes is dreadfully short of well-trained men, particularly at the junior and middle management levels. The reasons for the shortage are many, such as depressions, world wars, death and disability within a company, and many executives do not work until retirement age because of their failure to protect their health.

Many companies have made their greatest expansion during the past 15 years. The executives in the business have attempted to carry the entire load of management; thus, we have a situation never before experienced in business. Where the life-giving executive supply came from, left to chance and accident, the attitude has been that there would be a hearty, rip-snorting office boy-to-president individual around when needed.

Today owners of businesses are asking: Where can we find some good management people? The facts are they are not available. Twenty-five years ago, these were unborn questions. In 1936, the head of the United States Steel's finance committee said: "The crux of finding business leaders is not so much the need for men nor the scarcity of proven leaders, as it is the failure of American business management generally to introduce an orderly procedure of selecting and a systematic program for training and development, and then proper assignment of executive personnel. We have gone on the theory that the men needed—the leaders of today and tomorrow—are automatically available among the millions in industry. But how incomplete and how great the error to think that any business can use catch-as-catch-can methods in securing, selecting and developing executive management personnel."

Some companies have had the vision to establish organized ways to discover, train, promote, compensate, develop and retire members of the executive group, and more than ever before, what management does with its people is vital to the life of any company.

May Need Changes

Before the owners of the business attempt management training or coaching, they must admit to themselves the possibility of having to make changes in company custom and personal attitudes. Some changes may have to be made in daily routine. Too often managing personnel find themselves taking work home at night and on week-ends to get routine work done; they have no time to dream, no time to think, no time to plan about the future. Some way must be found to stop them from wasting their time on insignificant day-to-day details so they will have a chance to absorb and think about company policy, new ideas and long-time future plans and problems.

If an executive is unaccustomed to having company policies subject to scrutiny and honest criticism, he should try to become accustomed to it. One of the established marks of a keen executive is "creative thinking"—and if his employees are to create, if they are to become managing prospects, they cannot be "locked-up" by immovable company policies and traditions. When top management will not budge an inch, their employees tire of encountering a wall and lose interest and refuse to try.

The American feed industry has made outstanding growth in the past 25 years. The outlook and opportunities ahead appear greater than could be imagined a few years ago.

Technical knowledge is available today for all concerned, but the growth and financial success for the future will depend on management knowledge of each phase of the business so as to establish and control costs, provide facilities for growth, and sell merchandise instead of giving their working capital to their customers in the form of uncontrolled credit.

Building management for tomorrow is a great challenge, and for those who think, plan, work and manage, it will pay good dividends in the years ahead.

Brewers Dried Grains

Dried Brewers Yeast

Primary Source

The New Century Co.

3939 So. Union Ave.

Chicago 9, Ill.

Phone: Yards 7-1003

NELLIS

FEED COMPANY

Brokers

of Feed Ingredients

4010 Board of Trade Bldg.

WAbash 2-7322 TWX 623 Chicago 4, Ill.

Wool Growers' Board Discusses Imports, Grading, Research

SAN FRANCISCO — The need for import quotas on lamb and mutton, a revision in the grading of lamb and need for continued and expanded research work on sheep diseases were stressed by the board of directors of the California Wool Growers Assn. at their annual fall meeting in San Francisco.

In view of the current depressed market for lamb and wool, and following one of the most erratic marketing seasons in recent years, the group strongly urged the establishment of import quotas on foreign lamb and mutton. Pointing to a recent advertisement by a midwest importer which depicted lamb prices falling, the directors emphasized the impact that this frozen foreign lamb is having on the domestic market.

At a noon luncheon the group heard Joe Malcolm, overseas representative of the New Zealand Meat Board, stress the need for exporting lamb and mutton to overseas countries, including the U.S., as the only means of getting currency to buy goods and services New Zealand needs. He pointed out that New Zealand exports and imports more per capita than any other nation in the world, with the United Kingdom its best outlet for meat and meat products.

Imports of foreign meats are not the only thing plaguing the domestic sheep industry, the group decided, and adopted a strong resolution asking the National Wool Growers Assn. to request the livestock division of the Agricultural Marketing Service, U.S. Department of Agriculture, to meet with an industry committee to revise the lamb grades so they will be more in line with present consumer demand.

Olin Henry Timm, Dixon, Cal., chairman of the state-wide animal health committee, reported on research work being conducted at the University of California on summer pneumonia in sheep and the scrapie eradication program. Following the report, the directors commended the California Department of Agriculture and the USDA for their current program of slaughtering scrapie infected and exposed sheep and urged that a research program be further supplemented and supported.

The group selected San Francisco for the 99th and 100th annual conventions of the association. They urged members planning to attend the National Wool Growers convention at Portland, Ore., Jan. 25-29, to make their reservations early to assure accommodations.

SANDER R. MOE DIES

NORTH BEND, ORE.—Sander Rudolph Moe, 66, a partner in Moe's Feed Co. here, died recently after suffering a heart attack in his home.

Meat Institute Board Names New Chairman

CHICAGO — A. D. Donnell, president of the Rath Packing Co., Waterloo, Iowa, has been named chairman of the board of directors of the American Meat Institute Foundation, internationally known research institution at the University of Chicago, it has been announced.

Mr. Donnell succeeds H. Harold Meyer, president of the H. H. Meyer Packing Co., Cincinnati, who retired from the foundation board after having served successively as its treasurer and vice chairman and chairman of its board. Mr. Donnell was vice chairman of the foundation board during the last year and is succeeded in that position by James D. Cooney, president of Wilson & Co., Inc., Chicago.

The new officers were elected during the foundation's annual meeting, held at the institution's research laboratories on the university campus and at which more than 200 sponsoring members of the AMIF were represented in person or by proxy.

The foundation, which now is beginning its twelfth year of research, maintains a staff of more than 50 research scientists and is engaged in long-range development of scientific information applicable to the production of livestock and the processing and utilization of products derived from meat animals.

Construction and equipment of its laboratory building, now valued at more than $1 million, were financed by voluntary contributions made by establishments in the meat packing and allied industries.

In addition to the board chairman and vice chairman, the foundation members re-elected Robert C. Munnecke, president of the P. Brennan Co., Chicago, as treasurer and named five new members to serve on the board of directors for three-year terms, expiring in 1961.

Sell Feeds by Weight, Kentucky Dealers Told

LEXINGTON, KY.—Corn or other bagged feedstuffs cannot be sold in any manner other than net weight or dry measure in Kentucky, according to George L. Johnson, Division of Weights and Measures, Kentucky Department of Agriculture. This answer was given in response to dealers who asked if they could sell corn and other feedstuffs by bag rather than by the pound or bushel.

Section 363:285 of the Kentucky Revised Statutes states:

"No person shall sell any commodity in any other manner than by net weight, liquid measure, linear measure or numerical count except cordage and paper products customarily sold by gross weight.

"No person shall sell, offer or expose for sale any commodity so packed which is misleading to the buyer as to the net weight, measure or numerical count."

Shelley says
Come rain or come shine
Shellbuilder is ready to serve
you with the best pure crushed
reef oyster shell. Order Shellbuilder today sure.
Shellbuilder
PURE CRUSHED
SHELLBUILDER COMPANY • MELROSE BUILDING • HOUSTON, TEXAS / Territories open for qualified brokers.

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

Make Your Customers
GOOD Customers . . . all year 'round
SUPREME Brand
Condensed BUTTERMILK
HERBERT K. CLOFINE, Inc.
MILK PRODUCTS
315 South Smedley St. Phila. 3, Pa.

WORTH LOOKING INTO

NEW PRODUCTS • NEW SERVICE • NEW LITERATURE

DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7317—Bulletin on Oat Crimpers

The availability of a bulletin covering single and double roller mills designed specifically for oat crimping has been announced by Sprout, Waldron & Co., Inc. Bulletin 209 describes oat crimpers for small mills, custom mills and large commercial feed manufacturers. Photos, engineering drawings and tables giving dimensions and specifications for standard and deluxe models are included. The bulletin also describes two oat crimping systems. For copies of the bulletin, check No. 7317 on the coupon and mail.

No. 7311—Bulk Handling Shovel

An "Electro-matic Scoop" for handling and unloading bulk material has been announced by Munson Mill Machinery Co. The shovel features unit construction and low horsepower requirements through an integral gear reducer and magnetic clutch which provides power to the shovel. The unit is operated by magnet controls which are handled by the operator's thumb. For more information, check No. 7311 on the coupon and mail to this publication.

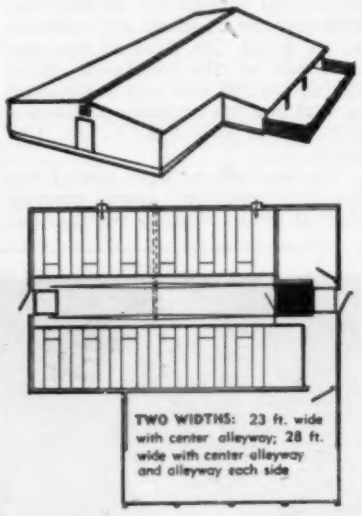
No. 7308—Farrowing, Growing Building

The Permco Faro-Gro Unit has been announced by the Permco Manufacturing Co. The unit's farrowing stalls can be converted to growing pens and back for five litters a year. Construction features include Permco wooden roof trusses; siding and interior lining of ¾" exterior fir plywood; and roofing of corrugated aluminum. Ceiling and walls are insulated. Check No. 7308 on the coupon and mail to this publication for details.

No. 7315 Bulk Feed Body

Dorsey Trailers announces a new model Dorsey Bulkmaster bulk feed body with twin-screw conveyor system. The screw conveyor design, the company claims, results in a cost-

reduction plus a 10% decrease in weight. The conveyor system is sealed against leakage and is hydraulically powered. Speed of conveyor and discharge augers can be independently controlled. For details, check No. 7315 on the coupon and mail to this publication.



No. 7309—Float Valve

Miller Manufacturing Co. announces the "Giant Trough-O-Matic Float Valve" for converting any tank or trough and automatically controlling the water level. The valve can be used with any water source for either hose line or pipe fitting, with any water pressure, the company says. The unit is adjustable to fit all hog tanks, stock tanks or drums and poultry troughs, with output up to 125 gal. an hour. The unit is made of brass and non-rust plastic. Details can be obtained by checking No. 7309 on the coupon and mailing to this publication.

No. 7310—Bulletin on Inventory Counter

A bulletin (Product Data Sheet 5805) offered by Richardson Scale Co. tells about the company's Inventory Counter and Totalizer. Text material in the two-page, two-color bulletin discusses working operations of the unit and gives specifications. Photographs show the unit separately and incorporated into another Richardson device, the Select-O-Weigh indicator panel. For copies, check No. 7310 on the coupon and mail.

No. 7314—Aluminum Bulk Trailer

A hopper bottom, aluminum dry bulk trailer, designed to haul lighter weight materials such as feed, grain and fertilizer, has been announced by Butler Manufacturing Co. The trans-

ports are available in a choice of unloading models: A center unloading gravity dump model or a swivel mounted auger model that discharges to the rear or either side of the trailer. Manholes are 30 in. by 72 in. and slide gate outlets are 24 in. by 42 in. For more complete information, check No. 7314 on the coupon and mail to this publication.

No. 7316—Flock Feeder

A flock feeder, designed for use with deep litter programs, has been introduced by the National Ideal Co., manufacturer of Premier poultry equipment. Called the PG-5-DL, (5 ft.) and PG-8-DL (8 ft.), the feeder features 11 in. legs instead of the 8 in. legs used on regular flock feeders, the company says. The trough is made of galvanized steel with legs and braces of angle steel. The 5 ft. feeder holds about 32 lb. mash and the 8 ft. feeder holds about 51 lb. mash. For details, check No. 7316 on the coupon and drop in the mailbox.

No. 7307—Aluminum Scraper

An all-aluminum hoe which can also be used as a scraper has been introduced by the Aluminum Ladder Co. The tool can be used for removing or scraping dry chemicals, feed-

stuffs and other materials from vats, tanks, barges, storage bins and other containers. The hoe is lightweight, non-corrosive, non-splintering and non-sparking. The blade is 6 in. deep and comes in 17 to 20 in. widths. For details, check No. 7307 on the coupon and mail.

No. 7312—Drum Cover Data Sheet

Drum covers to prevent dusting and contamination during automatic weighing of chemicals, powders and other materials are described in a product data sheet (5804), offered by Richardson Scale Co. The sheet explains how the drum covers operate plus how the automatic scale units operate with the drum cover being used. Optional arrangements for increased capacity are also listed. Photos and illustrations are contained in the sheet. For copies, check No. 7312 on the coupon and mail.

No. 7313—Booklet on Stilbestrol Feeding

Eli Lilly & Co. has prepared a 20-page, fully illustrated booklet entitled "Stilbestrol Feeding." Contained in the booklet is information on how stilbestrol can improve profits, what benefits can be expected from the product, results of college tests, how the product should be fed and a section of questions and answers about stilbestrol. Photos, tables,

Send me information on the items marked:

- ☐ No. 7307—Aluminum Scraper
- ☐ No. 7308—Farrowing, Growing Building
- ☐ No. 7309—Float Valve
- ☐ No. 7310—Bulletin on Inventory Counter
- ☐ No. 7311—Bulk Handling Shovel
- ☐ No. 7312—Drum Cover Data Sheet
- ☐ No. 7313—Booklet on Stilbestrol Feeding
- ☐ No. 7314—Aluminum Bulk Trailer
- ☐ No. 7315—Bulk Feed Body
- ☐ No. 7316—Flock Feeder
- ☐ No. 7317—Bulletin on Oat Crimpers

(PLEASE PRINT OR TYPE)

Others (list numbers) .....

NAME .....

COMPANY .....

ADDRESS .....

——— CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL ———

FIRST CLASS PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

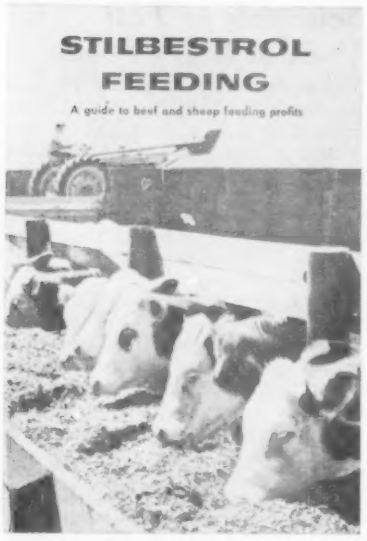
BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Feedstuffs

P. O. Box 67

Reader Service Dept. Minneapolis 40, Minn.



charts and maps are used in connection with text materials. For copies of this booklet, check No. 7313 on the coupon and drop in the mailbox.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number on the coupon and forwarding it to Feedstuffs.

No. 7247—Chemical company brochure, U.S. Industrial Division, National Distillers and Chemical Corp.
No. 7248 — Animal health folder, Merck & Co., Inc.
No. 7249 — Poultry health folder, Merck & Co., Inc.
No. 7250—Automatic egg counter, Hawkes Cage System.
No. 7251—Poultry de-winger, Dakota Ranches.
No. 7252—Hammermill literature, Prater Pulverizer Co.
No. 7253—Folder on "Penstrep" line, Merck & Co.
No. 7254—Texturing material, Philip R. Park, Inc.
No. 7255—Ventilation system, Rolfes Grain Aeration Companies.
No. 7256—Story on feed mills, Sprout, Waldron & Co., Inc.
No. 7257—Mailing piece on pulverizers, Prater Pulverizer Co.
No. 7258—Weigher, filler bulletin, Richardson Scale Co.
No. 7259—Stone detector, Seedburo Equipment Co.
No. 7260—Cattle health product, Merck & Co., Inc.
No. 7261—Equipment brochure, FM Engineering Co., Inc.
No. 7262—Custom feed milling booklet, Prater Pulverizer Co.
No. 7263—Hammer mill, Sprout, Waldron & Co.
No. 7264—Poultry feeder, Oakes Manufacturing Co.
No. 7265—Animal health product, Pratt Laboratories, Inc.
No. 7266 — Magnetic separator housing, Eriez Manufacturing Co.
No. 7267 — Pneumatic conveying bulletin, The Day Co.
No. 7268—Portable aeration unit, Gerber Roto-Flo Co.
No. 7269—Pneumatic handling system, Sprout, Waldron & Co., Inc.
No. 7270 — Automatic typewriter readout, Richardson Scale Co.
No. 7271 — Gross bagging scale, Richardson Scale Co.
No. 7272—Impact mill, "Entoleter" Division, Safety Industries, Inc.
No. 7273—Revolving valve, Gerber Sheet Metal, Inc.
No. 7274 — Dryer control panel, Campbell Dryer Co.
No. 7275—Booklet on fats in feeds, Monsanto Chemical Co.
No. 7276—Automatic feed weigher, Seedburo Equipment Co.
No. 7277—Poultry feed brochure, Mechanical Poultry Feeder Assn.
No. 7278—Report on bulk handling, Towmotor Corp.
No. 7279 — Metal-free slat floor, Munro Egg Automation Co.
No. 7280 — Bulk storage - mixing

BETTER PRODUCTS..... MERCHANDISED BETTER

You may have noticed that each FOXCO "Product of Progress" is the best of its kind available. Please remember, too, that merchandising aids accompanying the product are among the most imaginative in the farm field . . . providing a profitable sales push.

Merchandising *sells* the customer. The quality of the product *keeps* him sold.

GRAN-I-GRIT
Stretches feed. Faster growth. More eggs.

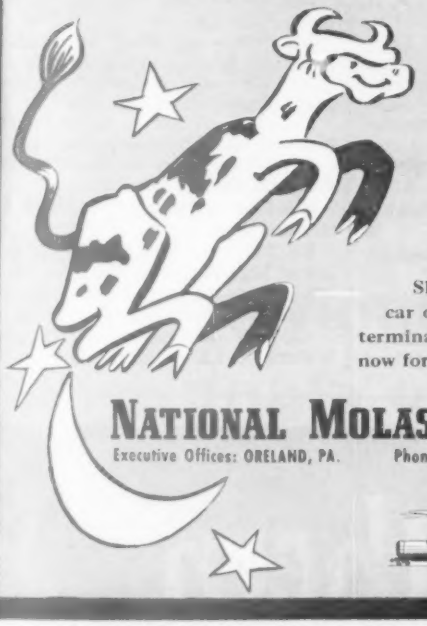
EGGSHELL BRAND PURE REEF OYSTER SHELL
Clean, odorless. The industry's standard.

SERVALL-STAZDRY
Your best litter buy.

AUREOMYCIN (Aurofac®)
Fed continuously at high levels, helps prevent diseases, promotes faster growth.

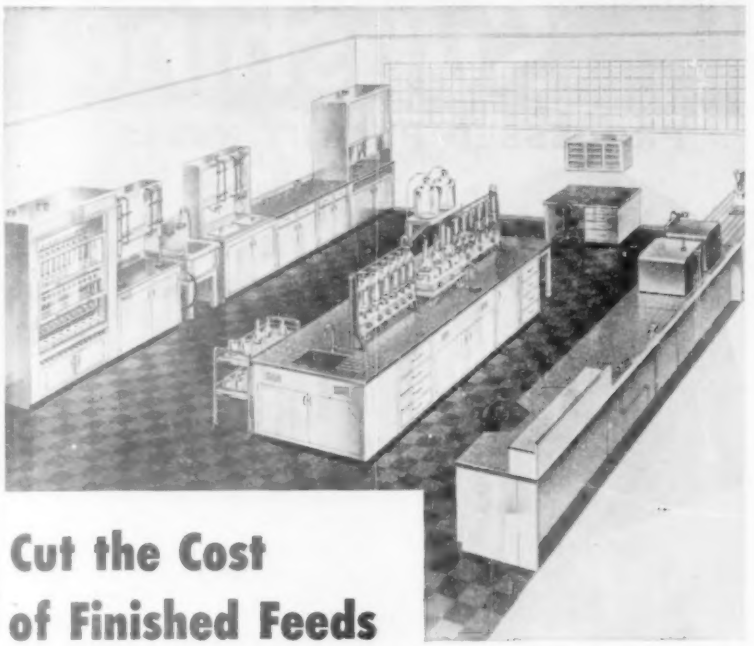
Products of Progress
THE FOX CO.
NEWFIELD, NEW JERSEY
BROADWAY, VA. SELBYVILLE, DEL.
Phone OXford 2-4400

more satisf **ACTION!**



. . . with the world's finest cane blackstrap feeding molasses. Shipped promptly by tank car or tank truck from nearby terminals. Write — wire — or phone now for quotations!

NATIONAL MOLASSES COMPANY
Executive Offices: ORELAND, PA. Phone: Livingston 8-5900 (Philadelphia)



Cut the Cost of Finished Feeds $1 to $2 a Ton

That's how much accurate laboratory determination of the protein content of ingredients, at the time of mixing, can save on the cost of finished feeds*. When you know the exact protein content of an ingredient, you spend only the amount necessary . . . and no more . . . to produce a feed that meets your specifications. No need to add extra amounts of an expensive ingredient just to play safe.

Above is a model LABCONCO laboratory. We manufacture all of the apparatus and furniture required to equip your plant with a laboratory just like it, or larger or smaller depending on your requirements. This includes the Kjeldahl apparatus for protein determination (extreme left) right down to the glassware cart in center foreground.

Accurate protein determination is just one of many advantages a modern LABCONCO laboratory offers you. Why not write today. We are always happy to submit plans and cost estimates. No obligations. Just write

LABORATORY CONSTRUCTION COMPANY
8811 Prospect Kansas City, Mo.

*According to a noted feed authority as quoted in Nov. 6, 1954, issue of Feedstuffs. Estimate is for average plant, with average safety-factor formulation, using popular feed ingredient analysis chart. Estimated savings will vary as prices of ingredients vary, also will depend on protein content of feed being used.

tank, Columbian Steel Tank Co.

No. 7281—Bin level indicator, Roto-Indicator.

No. 7282—Antibiotic technical bulletin, Merck & Co., Inc.

No. 7283—Rotary batch blender, Munson Mill Machinery Co.

No. 7284—Hormone implants, E. R. Squibb & Sons.

No. 7285 — Pneumatic unloading system, Sprout, Waldron & Co., Inc.

No. 7286 — Bag stacker bulletin, Power Curve Conveyor Co.

No. 7287—Filling machine feeder, Frazier & Son.

No. 7288 — Conveying equipment, Yancey Sales, Inc.

No. 7290 — Portable air vibrator, Cleveland Vibrator Co.

No. 7291—Animal health booklet, Abbott Laboratories.

No. 7292 — Punched card reader, Richardson Scale Co.

No. 7293—Tramrail booklet, Cleveland Tramrail Division, Cleveland Crane & Engineering Co.

No. 7294 — Rotary knife cutter, Munson Mill Machinery Co.

No. 7295 — Equipment brochures, Oakes Manufacturing Co.

No. 7296 — 20-ton storage bin, Leach Manufacturing Co.

No. 7297—Whey product, Western Condensing Co.

No. 7298—Alfalfa bale shredder, Lakeland Engineering Equipment Co.

No. 7299—Animal health product, Pratt Laboratories, Inc.

No. 7301—Folder on batch mixers, Munson Mill Machinery Co.

No. 7302—Bulk handling system, AAA Equipment Service Co.

No. 7303—Cobalt bullets, Nicholas of America, Ltd.

No. 7304 — Round hog feeder, Oakes Manufacturing Co.

No. 7305—Moisture determination balance, Seedburo Equipment Co.

No. 7306 — Booklet on turkeys, Whitmoyer Laboratories, Inc.

VPI Poultry Specialist Traces Development of Broiler Efficiency

BLACKSBURG, VA.—Figures illustrating the growing efficiency of broiler production have been reported by Dr. Arthur T. Ringrose, poultry specialist at Virginia Polytechnic Institute.

Dr. Ringrose pointed out that in 1935-39 it took 4.2 lb. of feed to produce 1 lb. of broiler, and that in 1950-54 it took 3.1 lb. of feed to produce 1 lb. of broiler. In 1957 it took 2.4 lb.

This is a 26% improvement in feed efficiency from 1939 to 1954, and in the last three years there has been another 10% improvement in broiler rations as a result of high energy and high fat rations, Dr. Ringrose said.

He went on to say that in 1954 production cost of broilers was about 25¢ lb. In 1957, production costs were down to 15-16¢ per pound of broiler. This has been brought about mainly by improvement in feed efficiency, but an increase in inherited growth rate has also played an important part, the poultry specialist related.

"There is no indication that a stopping point has been reached. Technical improvements arising from recent research in nutrition, preventive drugs and developments at broiler breeding farms indicate that even more efficient production is coming," Dr. Ringrose concluded.

Scientists to Test Urea in Dairy Feed

BRENTWOOD, N.H.—A comprehensive study of the use and effects of urea in dairy rations will be conducted at the new animal nutrition laboratory at the University of New Hampshire as soon as the laboratory is completed, according to Dr. Harry A. Keener, director of the University of New Hampshire Agricultural Experiment Station.

Speaking at the annual meetings of Circuits No. 1 and No. 27 of the New Hampshire-Vermont Breeding Assn. at the Rockingham County Home in Brentwood, Dr. Keener said his researchers will test urea up to 40% in various rations, and will publish their findings.

Meanwhile, cattle at the university have been fed urea mixtures with no harmful effects. Dr. Keener said there seems to be little possibility that farmers feeding up to 33% urea would encounter trouble, but he advised the use of urea in commercially-mixed rations, rather than home mixtures, until the university can report more definite information.

FORM PARTNERSHIP

LEMOORE, CAL.—Arthur H. and Helen A. DeRaad are now partners in the DeRaad Feed & Seed warehouse in Lemoore.

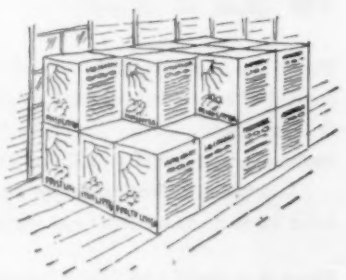
Southern Sunshine

PROCESSED PEANUT HULLS

"Nature's Perfect Poultry Litter"

ECONOMICAL...EASY TO STORE

Southern Sunshine is competitively priced and money-saving from a labor standpoint. It comes in 20″ x 20″ x 24″ corrugated cartons that are easy to handle and stack. Each carton, packed by special compressor equipment, contains enough litter for 120 sq. ft. of floor space.



SPREADS EASILY

Southern Sunshine pours easily, expanding into a huge pile for fast spreading. No lumps to break up . . . no roots or vines . . . nothing but clean peanut hulls. When litter is spent, its light weight makes it easy to remove with a shovel.

ANDERSON IS YOUR ONE-STOP HEADQUARTERS FOR POULTRY SUPPLIES & EQUIPMENT

ORDER NOW!

ANDERSON BOX COMPANY

INDIANAPOLIS, INDIANA

Phone ME 4-2323

MOST POWERFUL ANTIOXIDANT FOR LOW-COST STABILITY OF FATS

Griffith's® **G-12**

All Ingredients—Including "BHT" Approved Safe and Used for Human Consumption

G-12 is the most powerful synergistic, oil-soluble feed grade antioxidant you can use. 100% oil soluble, easily mixed in fats, it assures low-cost protection against rancidity and long stability in storage. Write for free folder of facts about G-12. Specify G-12 in the fats you buy.

Longer Storage-Life for Feeds

Griffith

THE GRIFFITH LABORATORIES, INC.

CHICAGO 9, 1415 WEST 37TH ST.

UNION, N. J. **LOS ANGELES**

BUTLER

POLLYPHOS . . . OFFERS . . . TO YOU

A defluorinated phosphate of . . . proven high quality

America's leading feed and mineral manufacturers have used POLLYPHOS for years as a source of phosphorus. The texture . . . the blending characteristics . . . of POLLYPHOS . . . make this product a most desirable source of phosphorus supplement for . . . use in formulating all types of livestock and poultry feeds.

POLLYPHOS contains a phosphorus content of 19% . . . a minimum of 32% — maximum of 35% Calcium . . . and no more than .19% Fluorine.

POLLYPHOS has been tested for biological availability . . . proved to be a highly available source of phosphorus.

Butler Chemical Company is geographically located to insure prompt and dependable service to those areas West of the Mississippi.

Call, wire or write us, or the sales agent nearest you, for delivered price of POLLYPHOS to your plant.

Butler
CHEMICAL COMPANY

Sales Division — 1005 Esperson Building
Houston 1, Texas CApitol 2-9711

BC 5818

Plant and Warehouse Location

P. O. Box 938 • Phone ORchard 2-7587 • Galena Park, Texas

SALES AGENTS: Warner Brokerage Co., Inc., Minneapolis; Carroll Swanson Sales Co., Des Moines; James P. Sprigg Co., Los Angeles; White Star Concentrates Co., Portland; E. A. Towns Limited, Vancouver 1, B. C.

SUNSET FEED & GRAIN CO., INC.

PHONE CLEV. 2938 | 805 Dun Building Buffalo 2, N.Y. | TWX BU 71

FEED JOBBERS
AND
DISTRIBUTORS OF

KELLOGG HOMINY FEED — HUBINGER GLUTEN FEED
DYNAFOS DICALCIUM PHOSPHATE AND MULTIFOS
SODIUM BENTONITE
PACIFIC MOLASSES — PILOT OYSTER SHELLS
DU PONT'S "TWO-SIXTY-TWO" FEED COMPOUND
STONEMO GRANITE GRIT — CALF MANNA
NOPCO FEED SUPPLEMENTS
WHEAT GERM — WHEAT GERM OIL
AGRI-TECH ALFALFA PRODUCTS

INQUIRIES APPRECIATED

Minimum Flock Sizes Recommended

BLACKSBURG, VA. — The minimum size broiler flocks should be 10,000 birds on a part-time basis and at least 30,000 if full time, Dr. Arthur T. Ringrose, Virginia Polytechnic Institute poultry specialist, declared.

Dr. Ringrose pointed out that top efficiency in labor is essential for profitable production and that 10,000 broilers require from one-quarter to one-half of the labor of one man, while the labor for 30,000 broilers could keep one man busy full time.

"In terms of layers or breeders," Dr. Ringrose continued, "on a part-time basis one man can handle 1,000 birds, plus the replacements or 2,000 turkeys. For a full time operation, from a labor viewpoint, 4,000 layers, plus replacements, is the ideal unit or 5,000 turkeys—one flock of roasters and two or more of turkey broilers."

Livestock Research Trust Established

NEWARK, DEL. — An expanded program of animal husbandry research, teaching and extension work throughout the state has been made available through a trust established at the University of Delaware.

The trust has been established by S. Hallock du Pont, Wilmington, Del. Dr. John A. Perkins, university president, announced the designation of the professorship as the "S. Hallock du Pont Chair of Animal Husbandry." At the same time he announced the appointment of John H. Shropshire, formerly of Washington State College, as associate professor to develop the work in animal husbandry.

Additional stimulus to the university's new livestock program was reported at the same time in the form of a gift from Granville M. Read of Westover Hills and Read-Moor Farms, Forest, Va. Mr. Read's gift helped to provide a foundation beef herd, the first class of livestock in a program at the university that eventually is expected to include sheep and swine production as well.

In commenting on the significance of the trust, established by Mr. du Pont, George M. Worrilow, dean of the school of agriculture, said: "It will enable us to serve more adequately the livestock producers of the state, a segment of our agriculture that is becoming economically more important each year."

Mr. du Pont explained that much of his interest in livestock stems from work with beef cattle and swine on his farm near Newark.

The nine bred Hereford heifers which will make up the university's foundation beef herd are from Mr. Read's purebred herd at Read-Moor Farms.

Mr. Read, who is chief engineer with the du Pont firm, believes that production of good feeder cattle represents an excellent cash crop opportunity for Delaware farmers.

Give your feeds this pure whey extra:

KRACO

the fresh-dried whole whey that's naturally sweet

- no neutralizers added to upset milk mineral balance
- no fermentation to reduce high lactose content*

**Kraco is guaranteed at least 65% lactose—runs are usually between 70-72%*

When you supplement feeds with Kraco, you are using *pure* whey. Nothing has been added, nothing taken away. In processing Kraco, Kraft safeguards its freshness and sweetness in two vital ways:

1st: The whey from low-acid cheese is used.

2nd: It is dried within hours after it is drawn from the cheese vats. Acid content is guaranteed at not more than 3.5%.

Kraco contains all the whey nutrients, including the valuable whey factor, lactose (minimum 65%), milk protein (12%, mostly lactalbumin), milk minerals and B complex vitamins.

Ask the Kraft Man for full particulars.

KRACO *is a Kraft Product*

Order from
KRAFT FOODS *Div. of National Dairy Products Corp.*
500 Peshtigo Court, Chicago 90, Illinois

Poultry, Dairy Group To Meet in California

SAN LEANDRO, CAL.—A view of the dairy and poultry industries of the future will be presented at the annual convention of the Pacific Dairy & Poultry Assn. April 2-4 at the Hotel del Coronado, Coronado, Cal., according to Ralph J. Ahl, San Leandro, president of the association.

Built around the theme, "Understanding—Key to Our Future," the entire three-day meeting will be aimed toward giving the industry leaders who attend a clear understanding of the ways they can compete successfully in the years ahead.

The program has been scheduled so that conventioneers can attend speeches and conferences on six commodities—shell eggs, poultry, butter, cheese, egg products and turkey—without running into schedule conflicts.

Mr. Ahl said that basic handling and distribution techniques will be thoroughly discussed, as well as new and successful merchandising ideas. He emphasized that these topics will be covered both by convention speakers and at formal commodity roundtables where all persons interested in a given commodity will have a chance to ask questions and participate.

3 Distributors Named For Rhodia Piperazine

NEW YORK — Rhodia, Inc., New York, has announced the appointment of three additional distributors for its line of piperazine products for the feed industry.

The three new distributors are H. Mark McNeal Co., Charlotte, N.C.; Pete Metcalf Co., Dallas, and the John F. Young Co., Cincinnati. Other distributors of the products are Amburgo Co., Inc.; Bonewitz Laboratories, Inc., and W. M. Gillies Co.

The Star Performers on your Registration Tags

CONTENTS

Distillers Dried Solubles		Distillers Dried Grains	
Protein	24-30%	Protein	21-28%
Fats	5%	Fats	9-11%
Mineral	6%	T.D.N.	80-85%
T.D.N.	85%	Fibre	12-14%
B Complex Vitamins		B Complex Vitamins	
Growth Factors		Growth Factors	

Feed registration time is here again! This year be sure that your feed tags include Distillers Dried Grains and Dried Solubles. More and more feed mixers are learning that Distillers Dried Grains and Dried Solubles supply the important natural B-vitamins, proteins, minerals, and other growth factors, which produce real feed power.

'59 will be a normal production year, but to insure your supply, contact your favorite source soon.

DISTILLERS Feed Research COUNCIL

James B. Beam Distilling Co., 65 East South Water St., Chicago 1, Ill. * Berke Bros. Distilleries, 1019 Massachusetts Ave., Boston 18, Mass. * Brown-Forman Distillers Corp., P. O. Box 1080, Louisville, Ky. * Fleischmann Distilling Corp., Owensboro, Ky. * Glenmore Distilleries Co., Owensboro, Ky. * Grain Processing Corp., Muscatine, Ia. * Kentucky River Distillery, Louisville, Ky. * Medley Distilling Co., P. O. Box 593, Owensboro, Ky. * Merchants Distilling Corp., 1 N. LaSalle St., Chicago, Ill. * Midwest Solvents Corp., Atchison, Kan. * National Distillers Products Corp., Grain Products Div., 99 Park Avenue, New York, N. Y. * Park & Tilford Distillers Corp., 485 Fifth Ave., New York 17, N. Y. * Schenley Distillers, Inc., Grain Department, 26 East 6th St., Cincinnati 2, Ohio * Joseph E. Seagram & Sons, Inc., Grain Products Division, 7th Street Road, Louisville, Ky. * Stitzel-Weller Distilling Co., Station D, Louisville, Ky. * Hiram Walker & Sons, Inc., P. O. Box 1987, Detroit, Mich. * James Walsh & Company, Lawrenceburg, Ind.

OUTLOOK

Business and Agricultural Outlook

- General economic conditions
- Farm production expenses
- Demand for farm products
- Feed grain outlook
- Protein ingredient prices
- Livestock and poultry prices

By Dr. Leonard W. Schruben
Kansas State College

Dr. Leonard W. Schruben

AUTHOR—Dr. Leonard W. Schruben is a professor in the department of agricultural economics at Kansas State College. He was reared on a farm in Kansas, and attended Kansas State College, receiving a B.S. degree in agriculture. He continued his training at the University of Illinois, receiving an M.S. in agricultural economics, and then went on to Harvard where he earned an M.P.A. degree in public administration, an M.A. in economics and a Ph.D. degree in economics. Dr. Schruben's present work at Kansas State includes being in charge of grain marketing research, teaching courses in marketing, and being in charge of economic information. He has written numerous articles and bulletins, serves as consultant to farm supply firms, and as a consultant to the Agricultural Research Service of the U.S. Department of Agriculture. He also owns and operates a farm.

This article is written to help you make plans for 1959. Of course, no one knows how to forecast economic conditions and be certain that each forecast will be correct. However, careful study of economic information gives a good basis for estimating probable trends.

It was assumed when this was written, although not predicted, that: International tensions will continue on about the same level of intensity through the next year as has prevailed in 1958; inflation will be held in reasonable check, although the federal budget will be operated at a deficit and industrial wage rates will keep pace or exceed increased efficiency, both powerful forces on the side of further inflation; a depression of major consequence will not occur; most people seeking employment will find jobs although some unemployment will continue; and over-all spending by federal, state and local governments will at least equal, if not actually exceed, that of 1958.

If fundamental changes occur in any of these assumptions, the outlook is also likely to be changed.

GENERAL SUMMARY: Generally, favorable economic conditions are expected to prevail in the U.S. in 1959. More people will be employed which in turn means more money in consumers' pocketbooks. The recent recession appears to be a thing of the past, and the nation is headed for another period of comparatively prosperous times taken as a whole. Farmers, however, are not likely to share in this prosperity. Farm income probably will decline in 1959. Debts will be more difficult for farmers to pay, and accounts receivable likely will remain on the books of farm supply businesses for a longer period.

The return of prosperity is expected to touch off another round of inflation being fed both by government deficit financing and wage increases. Prices for industrial goods are likely to be higher in 1959 than in 1958 for most items. Machinery and equipment bought by farmers will be higher priced in 1959. The farm cost-price squeeze will continue after a brief respite in 1958.

From an over-all income point of view, 1958 was one of the best of recent years for farmers. Farm income in 1959, however, is not expected to hold up to the 1958 level. Downward pressure for practically all farm products will be experienced in 1959 because of tremendously large supplies produced in 1958. Large stocks of feed grains, wheat, soybeans, cotton, tobacco, all push down on farm prices. Total income of farmers in the U.S. is expected to decline from 5 to 10% below 1958.

Farmers will pay higher wages, taxes will continue to go up, and interest rates for borrowed capital will advance. Prices of things farmers buy from industry are likely to advance on the average.

It isn't a pretty picture income-wise for farmers in 1959. The cost-price squeeze will continue to encourage farmers who can to leave the farm to seek employment elsewhere. Other farmers will tighten their belts and keep on farming as they will learn new and improved ways of running their business. However, you will find some bright spots in the farm economy as you read the following discussion.

HIGHLIGHTS: Here are some highlights of the agricultural outlook, including something on grain and ingredient prices.

Farm production expenses of 1959 are expected to be higher than those of 1958, making another year of rising costs of production. This applies especially for those products and services which are not farm produced. Wages have been continuing upward, and prospects point to their going higher in 1959. Farm property taxes, interest and other off-farm supplies are also expected to advance fractionally. Fertilizer and prices are expected to hold steady, and manufactured feed prices may decline to somewhat lower levels.

Prices farmers receive for things they sell also are expected to average somewhat below 1958 levels. Everything considered, farmers as a group are likely to find their economic situation in 1959 somewhat worse than 1958 but still better than 1957.

Living expenses are likely to increase as further inflation forces prices up. This will not be an across the board increase—changes in price levels seldom are. Food will remain plentiful and cheap with price declines partially offsetting increased prices of hard goods. Consumer credit has room to increase, adding further to inflationary pressure. Inflation, however, isn't automatic. Productivity capacity in the U.S. is sufficient to meet foreseeable demands barring a war. Excessive inflation could lead within a couple of years to a bust and major depression. The business cycle isn't under control—yet.

Domestic demand for agricultural products is expected to increase even though the amount spent for food per person is not likely to be a great deal different in 1959 compared to 1958. This means total expenditures for food in 1959 will exceed 1958 due to increased number of people. Consumption will continue to shift to livestock products and away from cereals and potatoes. Marketing margins will increase as food processing firms seek to attract the eye of consumers with built-in services. Further investigation into this matter can be expected to continue; with little or no concrete action to show for the effort.

Foreign spending for farm products is expected to hold steady. The outlook for increased wheat and other grain exports is more promising than was realized in 1958. A considerable effort will be made by this country to export wheat, soybeans, grain sorghums, and other grains under various programs. Export volume is not likely to set new records, but increases in these exports are in order.

In the 1957-58 year ending June 30, the U.S. exports of farm products totaled about $4 billion. In the 1958-59 year, they are expected to total about $3.8 billion. This would place the current fiscal year among the six largest farm export years in U.S. history.

The wheat outlook for 1959 will be

(Turn to page 73)

TWINE-WIRE HEADQUARTERS

Volto

HOLLAND BALER TWINE
BINDER TWINE

DUTCH KING

VOLTO and DUTCH KING twines, featuring new long yardage of 231 ft. per lb., with 325 lb. break, or 257 ft. per lb., with 290 lb. break, are the finest Holland twines in the high quality field. Knotless, evenly spun from 100% pure EAST AFRICAN SISAL fibers. Fully treated. No better twine available anywhere!

BULLDOG BRAND

Modelo BRAND

BULLDOG and MODELO Mexican baler-binder twines, guaranteed knotless, are made from best Grade A Mexican fibers. Field tested—guaranteed to work satisfactorily in all twine-using balers. Low cost results in more bales tied per dollar. Stocks at key points for quick delivery.

Also available SHUCO domestic baling wire.

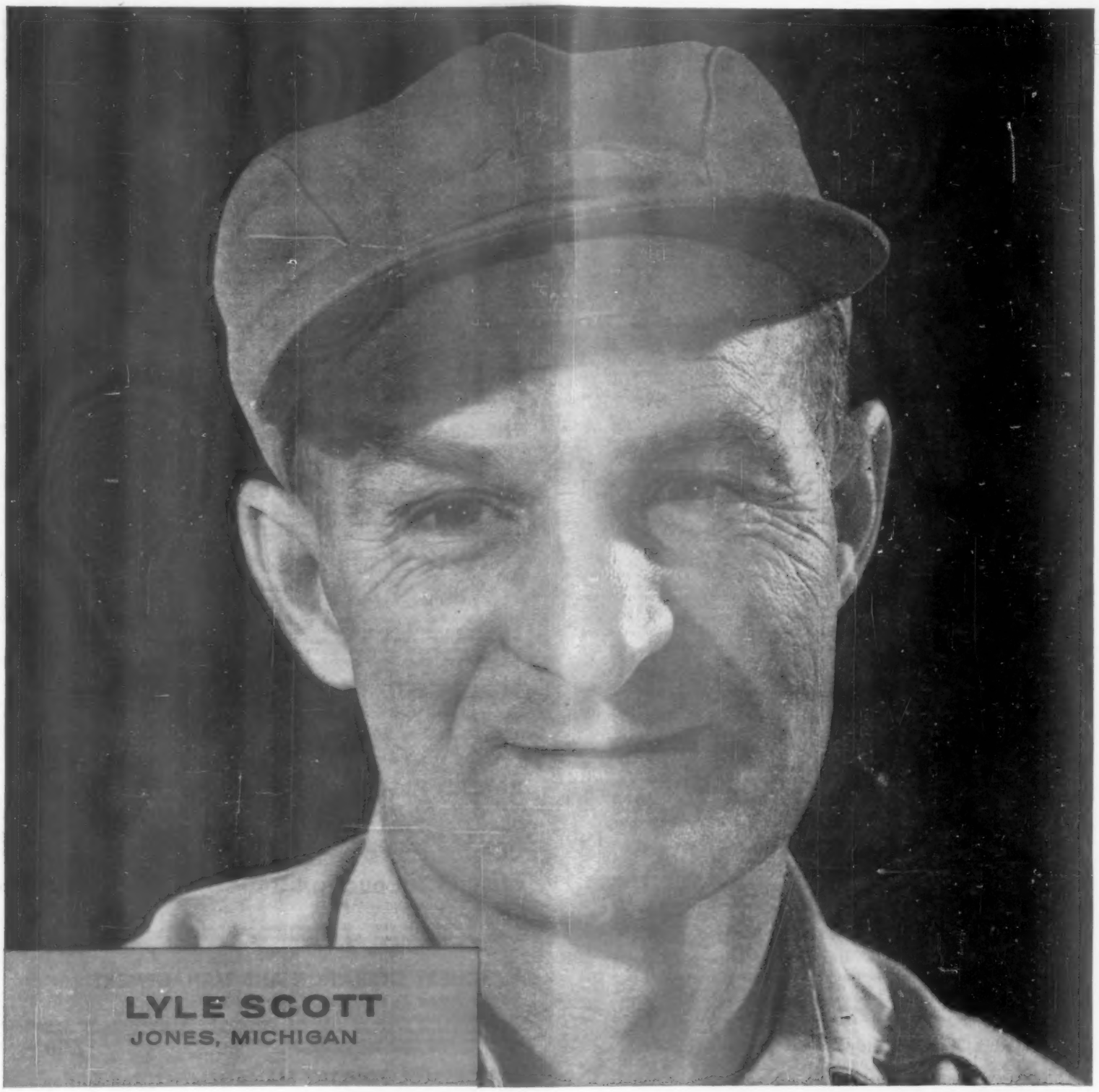
See your wholesaler or write us.

J. C. SHUFORD CO.

751 HOWARD STREET EVANSTON, ILLINOIS

Experienced in Cordage Since 1934

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS



"85% of the salt I sell is Morton Trace-Mineralized"

Almost 85 lbs. out of every 100 lbs. of livestock salt sold by Mr. Scott, manager, Jones Farmers Cooperative, is Morton T-M Salt. Such a record of T-M sales over plain salt sales is outstanding. Therefore, we asked Mr. Scott to write an open letter to all salt dealers telling just what he does to promote T-M Salt. Here is his advice:

"We believe in T-M and would like to see our farmers use it 100% in their feeding programs . . . and some day we may reach that goal. At any rate, with about 85% of our tonnage in T-M now, we are making good progress.

"We like to sell T-M for free choice feeding even when formula feeds or home-mixed grains containing trace minerals are fed. We sell it as insurance against mineral deficiencies that can throw a feeding program off balance . . . which, of course, would hurt the farmer and our business," states Mr. Scott.

You, too, can sell T-M Salt to increase business. If you already handle Morton T-M Salt, take a leaf from Mr. Scott's book and you will increase both your business and your profits. Recommend Morton T-M to your customers. If you don't handle T-M but would like to, just write Morton Salt Company, Chicago, Illinois.

BEST ADVERTISED—BEST KNOWN!
As a Morton dealer your T-M sales effort is backed by consistent, down-to-earth advertising in leading farm and ranch publications. Radio sales messages also tell farmers and ranchers everywhere the benefits of using T-M Salt. Listen to the Alex Dreier radio show, "Topic for Today," every Saturday immediately following the "Farm and Home Hour."

MORTON T-M SALT

The Feed Man's Library

Reader Service Department

Feedstuffs

FEEDS AND FEEDING, 22nd Edition

By Frank B. Morrison and Associates

Feeds and Feeding has again been entirely revised, because of the many discoveries made in nutrition and livestock feeding. In this 22nd edition, particular emphasis is placed on the new developments. The numerous experiments are summarized which have dealt with antibiotic, arsonic and surfactant supplements, and with hormones, including stilbestrol. Full information is given concerning requirements of various classes of stock for the vitamins, including B and the unidentified factors. The Appendix Tables are enlarged by 40%, with composition and digestible nutrients of 1,100 feeds **$9.50**

ANIMAL NUTRITION, 4th Edition (1956)

By Leonard A. Maynard

It covers the standard, constantly-needed facts on feeding farm animals, and also the newly discovered facts about how certain acids, minerals, vitamins, etc., can help in raising healthier, more productive animals. 474 pages, 77 illustrations and tables **$7.50**

BEEF CATTLE, 4th Edition

By Roscoe R. Snapp

Covers breeding, feeds, feeding, economic trends, equipment, etc. Includes a report of hundreds of feeding experiments. Has a special chapter on sterility by Dr. Harry Hardenbrooks, Jr., assistant professor of veterinary medicine, University of Illinois. 641 pages **$7.00**

IN-PLANT COST STANDARDS

1956 Feed Production School Transcript, Sponsored by Midwest Feed Mfrs. Assn.

This 220-page book will enable you to analyze the operations in your feed mill plant with an eye to reducing operating expenses in eight major cost centers: ingredient receiving, grain processing, mixing, pelleting, packing, warehousing, high molasses handling and maintenance. It contains a comprehensive and well-diagrammed report on in-plant cost standards.... **$15.00**

(If both "In-Plant Cost Standards" (listed above) and "Warehousing Operations" (listed below) are desired, the total price for the two books is $25.00.)

WAREHOUSING OPERATIONS and Tables of Standard Times

1957 Feed Production School Transcript, Sponsored by Midwest Feed Mfrs. Assn.

180 fact-filled pages with charts, graphs and tables prepared for practical application to your own mill operation . . . complete results of detailed research investigations into the largest single cost factor of the modern mill, warehousing and bagged-feed handling operations **$15.00**

RAISING LIVESTOCK

By Walter H. Peters and G. P. Deyoe

This book provides the owner, manager or caretaker of farm or ranch with easily found, specific suggestions for solving problems confronted in producing, handling and managing livestock, including preparing for market, selecting, feeding, housing, breeding and marketing influences. It tells of the many jobs to be done and exactly how to do them. 519 pages, 240 illustrations..... **$7.95**

DAIRY CATTLE FEEDING and MANAGEMENT, 4th Edition

By H. O. Henderson and Paul M. Reaves

Based on the original work by Carl W. Larson and Fred S. Putney. Expanded 10%, the Fourth Edition adds new chapters on minerals and vitamins, and much recent material on hay-crop silage, grass land farming, dairy cattle health programs, and digestion in the rumen and milk secretion. Designed for use profitably by the student and the practicing dairyman. 614 pages..... **$6.50**

SWINE SCIENCE, 2nd Edition (1957)

By M. E. Ensminger, Ph.D., State College of Washington, Head Department of Animal Science

A complete yet easily understood reference for swine feeders, breeders and those in auxiliary services to them. Covers history and development of the industry, its distribution, adaptation and future; types and breeds, establishing the herd, meat type breeds, selection and judging, breeding, feeding, grains and high energy feeds, protein, vitamin and milling by-product feeds, pastures, buildings and equipment, health and disease prevention, marketing and slaughter, management and showing. 543 pages, 192 illustrations..... **$5.00**

SWINE FEEDING AND NUTRITION (1957)

By T. J. Cunha, Department of Animal Husbandry and Nutrition, University of Florida

A new text for feeders, teachers of animal husbandry and their classes, county agents, nutritionists and workers in veterinary pharmaceuticals. Dr. Cunha is head of the Department of Animal Husbandry, a member of the Nutrition Committee of the American Society of Animal Production and the Swine Nutrient Requirements Committee of the National Research Council. The book includes reports on the most recent scientific feeding studies on swine. 300 pages, 47 tables, 46 illustrations **$5.00**

SWINE PRODUCTION, 2nd Edition (1956)

By W. E. Carroll and J. L. Krider

A guide to organization, establishment, management, feeding and marketing operations in raising of hogs. 408 pages, 65 illustrations... **$7.00**

RAISING SWINE—

By George P. Deyoe

A practical swine raiser's handbook. Stock selection, record keeping, feeding, care and handling, marketing techniques and preparing pork for home use. 447 pages, 201 illustrations, 40 tables **$6.95**

THE HANDBOOK OF FEEDSTUFFS (1957)

By Rudolph Seiden and W. H. Pfander

An encyclopedic presentation of production, formulation and medication. Designed to increase feed efficiency, explaining thousands of terms. Valuable to ranches and farms in production of feeds from right crops, utilization of plant as pasture, silage, hay, etc., and as an officially recognized feed product (meal, bran, grit, cake, etc.). Explanations and practical advice on medicated feeds, mineral feedstuffs, trace elements, growth stimulants and chemicals of importance to stockmen and poultry growers. Useful to feed manufacturers, nutritionists, students of animal biology, etc. 600 pages, 175 illustrations, cloth binding **$8.00**

THE STOCKMAN'S HANDBOOK (1956)

By M. E. Ensminger, M.S., M.A., Ph.D.

Intended for stockmen, those who counsel with stockmen and for teachers in animal agriculture. First 120 pages particularly of interest to feed trade, as breeding and feeding of livestock are covered. Other chapters have to do with judging, management, marketing, etc. The 1956 edition is the fourth printing, indicating strong demand for this guide. 598 pages, well illustrated, many tables. A practical handbook **$8.50**

MANAGING FOR GREATER RETURNS in Country Elevator and Retail Farm Supply Businesses

By Richard Phillips, Iowa State College economist

Written as a basic reference book for elevator and farm store managers, this book includes valuable information on over-all planning and management. Some of the topics included are planning for maximum business efficiency, use of an effective accounting system, increasing employee productivity, improving customer relations, improving purchasing, management of credit and operation of custom services. 500 pages **$7.00**

SCIENTIFIC FEEDING OF CHICKENS (1955)

By Dr. H. W. Titus

A small but absolutely authentic and concise treatment of vital information for feeders and feed manufacturers. 43 formulas for diets and mashes, vitamin content of over 60 feedstuffs; what feedstuffs are best, deficiency diseases; also relationship between feed consumption and egg production. 297 pages, hard binding **$4.00**

THE GRAIN TRADE: How It Works (1956)

By James S. Schonberg, Vice President, Uhlmann Grain Co.

A comprehensive book on the mechanics of merchandising and trading in cash and grain futures in the U.S. and Canada. Tells of what happens to grain following its purchase from the farmer, how it is graded, stored and conditioned, the establishing of price even before the crop is planted, the role of the university professor in the grain trade. This authoritative book will become the leading reference book on this subject for farmers, county agents, legislators, foreign buyers, government personnel, teachers, etc..... **$6.00**

FEEDING POULTRY, 2nd Edition

By Gustave F. Heuser, Professor, New York State College of Agriculture, and the School of Nutrition

Meets the needs of poultry producers, feed dealers and poultry students for the latest authoritative information on how to raise the best poultry by employing modern feeding methods. It evaluates findings on the value of feeds, types of feed to be used and nutritive economy. Deals with feeding and management for various purposes, chicks, breeders and egg producers. 632 pages... **$7.95**

POULTRY NUTRITION, 4th Edition Revised and Enlarged

By W. Ray Ewing

1,500 pages, 133 illustrations, of practical, factual information for feed manufacturers, feed dealers, hatcherymen, breeders. New chapter on antibiotics, new growth charts, feed formulas for rapid growth..... **$12.50**

POULTRY HUSBANDRY, 3rd Edition

By Morley A. Jull

526 pages, 254 illustrations, covers all aspects of the poultry business, from planning and building poultry plant to preparing poultry products for market. Breeding techniques, feeding procedures, disease control, incubation; it is an "encyclopedia" of poultry raising **$6.50**

POULTRY PRODUCTION—

By Leslie E. Card, Ph.D.

Eighth Edition, 416 pages, 216 illustrations and four plates. Deals with broiler production, flock management and marketing, breeding and selection, nutrition, disease control, etc. **$5.00**

HATCHERY OPERATION AND MANAGEMENT

By Ernest F. Funk and M. Richard Irwin

New, 1955; a practical guide to hatchery operation for the experienced and inexperienced. Covers all phases of the business, including advertising, selling, office procedure, labor costs, equipment, chick selection, sexing, etc. 350 pages, well illustrated **$7.50**

SUCCESSFUL POULTRY MANAGEMENT, 2nd Edition

By Morley A. Jull

447 pages, 188 illustrations, based on practical experience, brings practical helps for choosing breeds, increasing broiler and egg production, building range shelters, estimating egg output, buying feed, candling eggs, etc. **$6.95**

KEEPING CHICKENS IN CAGES, 4th Edition (1956)

By Roland C. Hartman, Editor Pacific Poultryman and Dale F. King, Dept. of Poultry Husbandry, Alabama Polytechnic Institute

A thorough revision of this reliable work on cage laying plants. Newly illustrated and broadened in scope with addition of Professor Dale F. King as co-author. More about feeding-results of experiments with caged layers. The importance of protein and energy levels for the highly bred producing stock. 304 pages, 176 illustrations, cloth bound **$5.00**

TURKEY MANAGEMENT, 6th Edition (1955)

By Stanley J. Marsden and J. Holmes Martin

A text on turkey raising and marketing by Stanley J. Marsden, Poultry Husbandman at the U.S. Research Center, Beltsville, Md., and J. Holmes Martin, Head of the Poultry Department, Purdue University. Covers breeding, rearing, feeding, preparation for the market, shows, diseases and their prevention and control. 1,000 pages, 124 illustrations **$7.00**

THE FEED MIXERS HANDBOOK, 2nd Edition (1956)

By Ross M. Sherwood

A text for feed mixers with special reference to the nutritional aspects of feed formulation. A practical handbook for practical men. 208 pages, cloth bound **$3.00**

No C. O. D.'s

ORDER FROM Reader Service Department, Feedstuffs, P.O. Box 67, Minneapolis 1, Minn.

dominated by large supplies, and much talk about programs for 1960 and beyond. There is need for a "bold, imaginative look at wheat policy." So far, most of us lack that particular vision. Wheat acreage allotments and marketing quotas are in effect for the 1959 crop. Minimum support rates have been announced at 1958 levels, so don't expect too much change in prices. Fairly favorable growing conditions prevailed this fall in much of the winter wheat area. Price adjustments will be to lower prices at least 30¢ bu. below support rates next harvest. In the meantime, some price declines may develop after Jan. 1, but if so, they will be minor. Many adjustments in the wheat economy are yet to come.

The corn outlook for 1959 is for somewhat lower prices. Support rates are to be lower, and lower corn prices are expected to prevail most of the 1959 year as a reflection of the bountiful harvest in 1958. Some seasonal increases in price may be realized by mid-summer, but it probably will not be as much of an increase as normally experienced. Prices may come under rather heavy downward price pressure during late 1959 as a result of increased plantings with the removal of acreage allotments, even with below normal yields.

Over-all feed grain supplies are the largest on record. The price support program will likely continue to dominate the price situation for corn because of the large quantities owned by the government. There is very nearly twice as much feed grain counting corn, per animal unit, as will be fed in 1959. Feed men can expect keen competition from low cost feeds as the year progresses. Margins are likely to remain fairly small for feed plants of average or above costs.

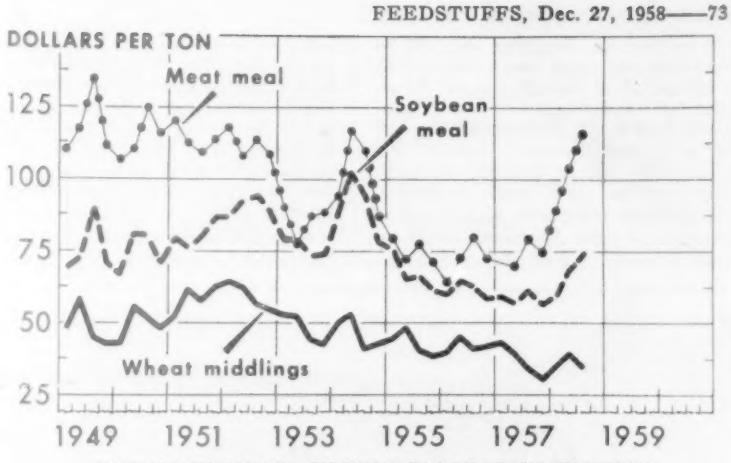
Grain sorghum prices are expected to be maintained during 1959 at somewhat lower levels than prevailed in 1958. The second year in a row of record crops of grain sorghum will exert downward pressure on prices for the next two years. Seasonally there is a rather strong tendency for grain sorghum prices to advance during the first six months of the year. There is expected to be some small advance from January through July but not as much advance as is the usual case. Feed manufacturers may find a larger than usual interest among farmers in supplementing the feeding of sorghum grain. Also, with large supplies available, feeding of livestock is likely to increase in the grain sorghum growing areas.

Soybean prices are expected to level out slightly at about the loan rate this year. The largest crop in record was harvested in 1958 and is expected to continue to exert downward pressure on prices through much of the year despite efforts to increase the export and domestic markets for soybean products. Facing new record crops year after year, as has been done by the soybean industry, has taught us not to be too pessimistic as to what can be done with the added production. There appears to be a sufficient supply to meet expected feeding needs. Watch developing world situation. Soybean oil is quite sensitive to war and threats of war. The speculative edge has been dulled by the numerous threats of war in recent years. However, prices still can move quite rapidly.

Prices paid for protein ingredients are likely to maintain at about 1958 price levels, with some small seasonal advances occurring during early spring. The large soybean crop will provide for a much larger output of soybean meal in 1959. It will be wise to check prices of protein supplement because they change frequently, and the one that is the best buy at one time may not be the best buy at some future time. Increased numbers of livestock of all kinds will increase the feeding potential for high protein supplementation.

Hay prices are not likely to show much strength in early 1959. Spring pasture conditions and hay prospects will dominate prices in the last half of the year. With normal production, hay prices will be hard put to make much of a recovery in 1959. In some areas feed dealers have profited by buying hay during periods of abundance and selling during a shortage. If you can finance such an activity and operate in an area subject to frequent drouth, you should give consideration to this project this year. Remember, both cattle and sheep numbers are increasing.

Beef cattle prices are favorable for 1959 and for several years thereafter. Cattle numbers are increasing. Cow and heifer numbers declined in 1955. During 1956 declines occurred in all classifications of beef cattle. However, all indications point to the conclusion this trend has definitely been reversed. Withholding breeding stock points to maintenance of slaughter at about present levels despite increased numbers. After numbers be-

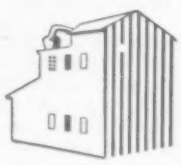


WHOLESALE PRICES, BAGGED, OF 44 PCT. SOYBEAN MEAL AND 50 PCT. MEAT MEAL AT CHICAGO; STANDARD MIDDLINGS AT MINNEAPOLIS.

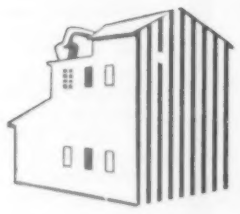
PROTEIN FEED PRICES GO UP—Good demand from the mixed feed industry and smaller supplies of animal protein feeds have been reflected in a sharp increase in prices of protein feeds the past year. The increase followed a lower trend in recent years caused by increasing production and supplies.

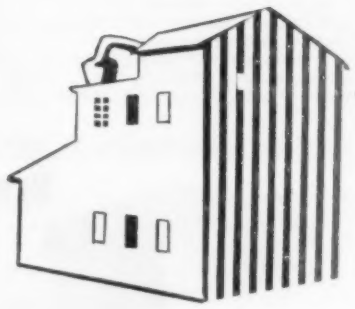
GROWING...

by feeds and services—



Ultra-Lifed Feeds and Services that is.





And there's a reason. The Ultra-Lifed Program gives you more than feed fortifications. It gives you exclusive vitamin and trace mineral blends to make feeds second to none in quality, but that carry a greater profit margin for you. In addition, Ultra-Life helps you sell your feeds with exclusive feeding programs and sales programs.

From the Atlantic to the Pacific, from Canada to South America, Ultra-Life fortifications and services for you are unmatched.

The revised edition of the Ultra-Life Book is now available—contains latest ingredient analysis information, energy tables, feed price conversions, and many other tables and charts of value to feed manufacturers. Write today on your letterhead for your free copy.

LABORATORIES, INC.

Main Office and Plant East St. Louis, Illinois

One of the Country's Oldest and Largest Manufacturers of Vitamin and Trace-Mineral Products

Minneapolis 1, Minn.

gin to turn up, slaughter still will be curtailed for about two years due to withholding of breeding stock. Thus, from the standpoint of market supplies, beef cattle prices probably will be in a strong position for another two years. Other factors, however, may tend to limit profit prospects. Competition from pork is expected to exert some price depressing effect on beef in 1959 and 1960. Sales of manufactured feeds to fatten cattle appear on the increase. When prices are at higher levels, markets for manufactured feed broaden. Sooner or later cattle feeders will be pushing for early marketing to beat the down phase of the cattle price cycle. If you are a feed man, you should be in a position to build sales.

Hog prices are expected to remain relatively favorable through the first half of 1959 although lower than during the same period of 1958. Substantial price declines are in prospect during the fall of 1959. During 1957 and 1958 the hog enterprise regained some of its former reputation as a "mortgage lifter." In so doing, the groundwork was laid for another phase of the hog cycle. Never before, since records have been kept, has the hog-corn price ratio been so favorable for as long a period as during the past year and a half. As information becomes more definite on spring farrowings, final marketing plans can be made. If spring farrowings are near the expected 15 to 20% increase, you can expect heavy downward pressure on prices in 1959. On the other hand, if farrowings are only as much as 10% over last spring, it is likely that only moderate price drops will be realized. We will have special reports for you in the Up and Down Column on this situation. Many hog farmers will be crowding rapid gains to beat the expected price decline in the fall of 1959. While it might not develop (this writer believes it will), you will have an unusually good opportunity to demonstrate the effectiveness of proper supplementation. You will be competing with low cost grains. Some farmers will be tempted to reduce feeding of supplements. Growth and cost comparisons will be made by farmers. Proper supplementation ought to compare favorably.

Sheep and lamb price prospects are relatively favorable during 1959. For the past 8 to 10 years sheep numbers in the U.S. have hovered near an all-time low since records were started in 1867. However, numbers are expected to increase this coming year. Sheep and lamb prices near 1958 levels are expected in 1959.

Dairy prices for 1959 appear to be somewhat of a repeat of 1958. Favorable milk-feed price relationships are expected during most of 1959. In addition, improved pasture conditions throughout the Midwest should improve producer positions incomewise. Cheap roughage, combined with ample soil moisture would contribute to favorable profit prospects. On the demand side, there is the prospect of increased consumer incomes. Cow numbers are decreasing. Higher beef prices offer dairymen a good opportunity to cull herds. Milk output, on the other hand, will continue at a high level, due in part to favorable milk-feed price relationships encouraging heavy feeding.

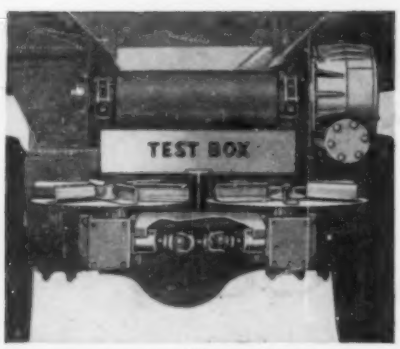
This year of cheap roughage and favorable grain prices will confront the feed dealer with keen competition. However, when profits are at reasonable levels, you can expect some increases in supplement feeding. Reportedly, some hay is of poor quality. You can be of service to your dairymen by suggesting proper supplementation. You might even want to run some tests on hay and roughage in your area in order to know better what feeds will help boost dairy profits.

Egg production in the U.S. during the first half of 1959 is expected to be higher than in the corresponding period a year earlier. Expectations during the next few months of a favorable egg-feed price ratio may encourage a few poultrymen to increase chickens raised next spring for flock replacement. However, egg prices have tended to be up one year, down the next for the last dozen years. Through the summer of 1959, prices are expected to continue to be under pressure. Fall and winter egg prices in 1959 may be more favorable.

Broiler and turkey production is expected to continue at a high rate despite relatively low prices in 1958. Prices received by growers probably will not differ from 1958 levels unless they are somewhat lower. A voluntary reduction of production has provided notable failures in the past. There is little indication in the present broiler situation that it will work this time. Each grower, or his contractor, waits for someone else to make the first move. The sensible thing to do, if you are involved, is to refigure your whole position on the basis of lower broiler prices. Historically, adjustments in situations of this kind have most often come through bankruptcy of someone.

My season's wish for the new year is that the present broiler situation proves to be an exception. I hate bankruptcy!

NEW LEADER
Engine Driven Combination Spreader
L-32S



This Exclusive NEW LEADER Metering Device Accurately Meters from 100 lbs. per Acre and Up!

The test box slides into position above the spinners. The feedgate is set—the spreader driven 50 ft.—the material coming off the conveyor into the test box is weighed—and calibrated in pounds per acre on the scale dial. Takes the guess work out of spreading . . . and more accurate spreading sells more fertilizer! Be sure to order this attachment with your rig.

The Most Accurate Lime and Fertilizer Spreader Made!

- 12.5 h.p. engine drives twin spinners at a constant rate for smooth, uniform spreads!
- 24" conveyor driven by PTO or drive shaft drive for more precise per-acre requirements!

The New Leader L-32S gives not only the accurate performance customers demand but unusual dependability and versatility as well. *Dependable* because a 6" higher, more heavily reinforced body holds bigger loads, gives years of extra use. A rugged 24" chain conveyor and 45° angle sides eliminate bridging, permit lower center of gravity. Sealed gears give a lifetime of trouble-free maintenance. Spreader can be equipped with a special heavy-duty, 4-ply rubber belt, riveted to an all-steel roller type conveyor . . . that lasts longer . . . prevents excessive stretch . . . and allows you to spread as low as 100 lbs. of material to the acre. Drive shaft drive available with cab controls . . . synchronizes conveyor speed with truck speed to stop "spreading skip" in muddy or snow covered fields. Two compartments (removable) also available. Front compartment with steel bottom dump doors. Rear compartment can be unloaded independently.

The New Leader L-22S with 7.0 h.p. engine available for lighter applications.

NEW LEADER L-42S Mobile Blender Accurately Blends and Spreads 3 Fertilizers at the Same Time!

Permits the operator to control both the amount of spread and ratio of 3 fertilizers depending on varying soil conditions! A 7 h.p. engine drives the twin spinners at a constant rate. A 36" belt-over-chain conveyor is powered from a drive shaft drive and synchronized to truck speed.

Ask Your Nearest NEW LEADER *Distributor for a Demonstration!*

ALA.—G. C. Phillips Tractor Co., Inc., Birmingham and Prichard.
ARK.—Truck Eqpt. Co., Fort Smith, Springdale
Southern Eqpt. Co., Little Rock, El Dorado
COLO.—Madron Mfg. Co., Inc., Denver
DEL.—Bohr Spreader Service, Inc., Harrington
FLA.—Henry W. Coulbear, Lakeland
G. C. Phillips Tractor Co., Inc., Birmingham and Prichard (Ala.)
GA.—Brooker Truck Eqpt. Co., Atlanta
IDA.—Oscar Bennion, Murray (Utah)
ILL.—D. H. Thomas & Son, Inc., Rockford
Koste Mach. Co., Inc., Robertson (Mo.)
Truck Eqpt. Co., Peoria
IND.—Emmert Trailer Corp., Elkhart
South Side Eqpt. Co., Inc., Indianapolis
Mulzer Brothers, Tell City, Ind.
IOWA—Badger Body Mfg. Co., Omaha
Snyder-Meylor Co., Sheldon
Wendler-Kraus Eqpt. Co., Inc., Cedar Rapids
KANS.—Perfection Truck Eqpt. Co., Wichita
Dealers Body & Eqpt., Kansas City
Perfection Spring & Eqpt., Kansas City
KY.—Mulzer Brothers, Tell City (Ind.)
Md.—Bohr Spreader Service, Inc., Harrington (Del.)
MICH.—Goss Seed & Eqpt. Co., Saginaw
Emmert Trailer Corp., Elkhart (Ind.)
Ostrom-Johnson Co., Rice Lake (Wis.)
Riedy-Manner Truck Eqpt., Toledo (Ohio)
MINN.—Snyder-Meylor Co., Sheldon (Iowa)
Ostrom-Johnson Co., Rice Lake (Wis.)
MISS.—A. P. Lindsey, Distr., Inc., Jackson
MO.—Koste Mach. Co., Inc., Robertson
Dealers Body & Eqpt., Kansas City
Perfection Spring & Eqpt., Kansas City
NEB.—Agrifirst Chem. Corp., Lincoln
Snyder-Meylor Co., Sheldon (Iowa)
NEV.—Lovelock Welding, Lovelock
N.J.—Bohr Spreader Service, Inc., Harrington (Del.)
N.Y.—H. O. Penn Mach. Co., Inc., New York, Westbury, L. I., and Poughkeepsie
Schmitz Sales & Serv., No. Collins
N.C.—O. H. Stanard, Raleigh
N.D.—Snyder-Meylor, Sheldon (Iowa)
OHIO—Orran Hofstetter, Orrville
D. L. Phillips, Damascus
Riedy-Manner Truck Eqpt. Corp., Toledo
Schodorf Truck Body & Eqpt. Co., Columbus
PA.—Annville Body Co., Annville
Ira D. Haines, Waynesburg
D. L. Phillips, Damascus (Ohio)
S.C.—O. H. Stanard, Raleigh (N.C.)
S.D.—Snyder-Meylor Co., Sheldon (Iowa)
TENN.—Tennessee Distr. Co., Donelson
UTAH—Oscar Bennion, Murray
VA.—O. H. Stanard, Raleigh (N.C.)
W. VA.—Farmers' Truck & Impl. Co., Buckhannon
D. L. Phillips, Damascus (Ohio)
WIS.—Brooks Industrial Sales, Inc., Sun Prairie
Ostrom-Johnson Co., Rice Lake

NEW LEADER
SALES & SERVICE

Write for illustrated bulletin

HIGHWAY EQUIPMENT COMPANY
634 D. Ave. N. W. Cedar Rapids, Iowa

Our Business is S-P-R-E-A-D-I-N-G-!

Hay prices are not likely to show

"Who, Me? Buy from Key Dehydrators?"

"DON'T BE SILLY! I deal only with the big companies — the outfits with gas storage, oil treatment and pelleting equipment. You see, I gotta have guaranteed protein and vitamin levels in everything I buy . . ."

"YOU DON'T SAY! I never realized those Key fellows had gas storage. Pelleting, oil treatment and bulk shipping facilities, you say? Hm-m-n . . . that's interesting . . ."

"OH, OH — I'M IN TROUBLE! I can't find the low-fiber, high-protein alfalfa meal I want! Say — how about those Key Dehydrator boys? Do you suppose . . ."

"PRETTY SHARP, HUH? Those Key Dehydrators really came through for me! Don't spread it around, though—I don't want the competition to get wise to my sources."

Could it be possible that you, too, are overlooking an important source of supply for low-fiber, high-protein, guaranteed-vitamin-content alfalfa meal? Don't wait for a crisis — get acquainted with one of the Key Dehydrators listed below right away. They're all friendly, helpful people — the sort you'd like to do business with.

These Are Your KEY *Alfalfa Dehydrators*

Al-Fa Meal Co.
Columbus, Nebraska

Beermann Bros. Dehy
Dakota City, Nebraska

Dehy Alfalfa Mills, Inc.
Fremont, Nebraska

F. J. Higgins Milling Co.
Schuyler, Nebraska

Trico Feed Mills
Minden, Nebraska

Iowa Valley Milling Co.
Iowa City, Iowa

Prairie Dehydrating Co.
Roanoke, Illinois

Progress Products Co., Inc.
Overton, Nebraska

Wraybill Dehydrating Co.
Sloan, Iowa

WESTERN

LIVE YEAST CULTURES

For 28 Years a Proven and Dependable Source of

ENZYMES

FOR ACTION ON GRAINS
UNIDENTIFIED GROWTH FACTORS
NATURAL B COMPLEX VITAMINS

Better assimilation — Lower feed cost

VIABILITY GUARANTEED

These Active Factors Can Be Added to

YOUR FEEDS

At Little or No Extra Cost

You will be hearing more and more about Enzymes in nutrition. Why not have them in your feeds now?

Write

WESTERN YEAST COMPANY

Chillicothe Illinois

QUIET VIBRATOR

CUTS OPERATING NOISE

Vibrator noise is sometimes objectionable, especially when vibrators are used in close proximity to personnel for extended periods.

The Cleveland Vibrator Company offers two types of vibrators to solve this problem. They are the RC and the AC vibrators.

The RC's are electric and operate on a rotating eccentric weight principle. They are an enclosed electric motor with rotating, cam-like weights on each end. The RC's make no more noise than a standard motor.

The AC's are similar to standard Cleveland Vibrators, except that the piston stroke is cushioned by a pocket of air. While noise is not eliminated, it is reduced to an unobjectionable level.

For complete catalogs and prices, write to

THE CLEVELAND VIBRATOR CO.
Dept. F12A, 2828 Clinton Av., Cleveland 13, O.

Blatchford's
ESTABLISHED IN 1900

NEW FORTIFIERS for LOWER FEED COST!

new BROILER Vitadine
FOR QUALITY FEEDING

"Power packed" with high levels of all essential nutrients including antibiotics, Arsanilic Acid, UGF, Vitamins and Trace Minerals.

new STARTER SWINEX WITH DYNAFAC

New Growth and Anti-Scours Agent

WRITE TODAY For Complete Report on These New Fortifiers! DEPT. 2128

Blatchford's
ESTABLISHED IN 1900

Main Plant and Offices WAUKEGAN, ILL. Midwest Plant Des Moines, Iowa West Coast Division Nampa, Idaho

FEEDSTUFFS
A WEEKLY NEWSPAPER
For the Feed Manufacturer, Feed Jobber
Feed Broker and Feed Dealer

Index for November, 1958

Volume 30 Numbers 44-48

*First number denotes issue date; "p" and second number denotes page number.

ADDITIVES:
Proposed Rules Under Additive Law ..... 29—p. 1
Researchers Question Additive Need ..... *8—p. 24
Texas Nutrition Conference ..... 1—p. 15

AMINO ACIDS:
Cornell Conference ..... 15—p. 10
Maryland Broiler Trial ..... 22—p. 18
Nutrition Factors in Chick Growth ..... 8—p. 133
Texas Nutrition Conference ..... 1—p. 15

ANTIBIOTICS:
Alabama Feed Nutrition Conference ..... 8—p. 46
Beef Cattle Feeding ..... 22—p. 30
Florida Nutrition Conference ..... 15—p. 4
Influence of Antibiotics on Dairy Calves ..... 29—p. 32
Montana Cattle Field Day ..... 8—p. 70
Report Sinusitis Cured in Ohio Experiments ..... 8—p. 125
Study Dispels Concern About Resistance ..... 29—p. 6
Tennessee Livestock Feeding Studies ..... 29—p. 30
Texas Nutrition Conference ..... 1—p. 15
Washington Meeting ..... 15—p. 7

ANTIOXIDANTS:
Seeks Okay on Santoquin ..... 8—p. 6

APPLE POMACE:
DDT May Make Apple Pomace Unsuitable ..... 29—p. 60

ARSENICALS:
Texas Nutrition Conference ..... 1—p. 15

ASSOCIATIONS:
Alfalfa Processors Assn. (Directors' Meeting) ..... 8—p. 144
American Feed Manufacturers Assn. (Named to Board) ... 15—p. 1
American Feed Manufacturers Assn. (Cornell Nutrition Meeting) ..... 15—p. 1
American Feed Manufacturers Assn. (Medicated Feeds Program) ..... 29—p. 1
American Feed Manufacturers Assn. (Sales Council) .... 29—p. 6
Animal Health Institute, Inc. (Expansion; Objectives) ... 15—p. 52
Florida Feed Dealers Assn. (Conference) ..... 15—p. 4
Illinois Feed Assn. (Election; Egg Group) ..... 8—p. 8
Illinois Feed Assn. (Convention) ..... 15—p. 6
Midwest Feed Manufacturers Assn. (Directors' Meeting) .. 1—p. 8
Midwest Feed Manufacturers Assn. (Production School) .. 15—p. 1
Midwest Feed Manufacturers Assn. (Production School—Bulk Handling) ..... 22—p. 10
Midwest Feed Manufacturers Assn. (Short Course) ..... 29—p. 10
National Egg Council (Officers, By-Laws) ..... 8—p. 7
National Renderers Assn. (Meeting) ..... 8—p. 4
Pacific Northwest Grain Dealers Assn. (Committees) .... 15—p. 76
Poultry & Egg National Board (Fund Drive) ..... 29—p. 6
U. S. Poultry & Egg Producers Assn. ..... 15—p. 113
West Virginia Feed Dealers Assn. (Meeting) ..... 15—p. 4
Western Grain & Feed Assn. (Convention) ..... 29—p. 1

AUTHORS:
Beeson, Dr. W. M.
Golden Era of Beef Cattle Feeding ..... 22—p. 30
Berglund, Roger
McMillen Opens New "Auto-Syntronic" Plant ..... 1—p. 18
Blair, Joss F.
Problem of Labor Costs ..... 15—p. 18
Catron, Dr. Damon V.
Service Is Essential ..... 1—p. 38
Combs, G. F., and Nicholson, J. L.
Maryland Broiler Trial ..... 22—p. 18
Douglas, C. R.
Methionine Supplementation of Laying Hen Feeds..... 15—p. 22
Ellis, Dr. William C., and Hastings, Dr. W. H.
The Pelleting and Acceptance of Semi-Purified Rations.. 29—p. 17
Finlayson, C. I.
Serving Time in a Custom Mill ..... 8—p. 18
Gates, George
Wirthmore Program Stresses Research ..... 1—p. 10
Harms, R. H. (see Douglas, C. R.)
Hastings, Dr. W. H. (see Ellis, Dr. William C.)
Hendel, Dr. Julius
Potential Use of American Feed Grains Abroad..... 29—p. 24
Hill, Dr. F. W.
New Viewpoints in the Nutrition of Layers ..... 8—p. 40
Hutton, Dr. Robert F.
Future Prospects for Use of Programming in Solving Feed Milling Problems (Part VII) ..... 8—p. 84
Where Should Feed Be Milled? (Part VI) ..... 1—p. 62
Johnson, Elton L., Meyer, Vernon M., and Waibel, Paul E.
Methods of Adding Fat to Poultry Rations ..... 15—p. 38
Johnson, J. D.
Bulk Handling of Finished Feed ..... 8—p. 30
McCracken, John J. (see Hendel, Dr. Julius)
Magee, Prof. A. C.
Integrated Programs for Swine Production ..... 29—p. 26
Meyer, Vernon M. (see Johnson, Elton L.)
Nelson, Al P.
Benefit From Public Relations Program ..... 1—p. 73
Well Rounded Milling Service ..... 8—p. 98
Nicholson, J. L. (see Combs, G. F.)
Odle, Stanley
Merchandising Bulk Feed ..... 8—p. 58
Smith, Oak B.
Producing Complete Pelleted Rations for Ruminants.... 8—p. 64
Waibel, Paul E. (see Johnson, Elton L.)
Watson, George H.
Firm Offers "Royal" Welcome ..... 29—p. 43
Williams, T. R.
Trends in the Turkey Business ..... 15—p. 44

BOARDS OF TRADE:
Los Angeles Grain Exchange (New Quarters) ..... 8—p. 89
Omaha Grain Exchange (Officers) ..... 29—p. 81

BROILER FEEDING:
Describes "Growth Spurt" Concept ..... 8—p. 8
Maryland Broiler Trial ..... 22—p. 18

BULK HANDLING:
Bulk Handling of Finished Feed ..... 8—p. 30
Feed Production School ..... 22—p. 10
Merchandising Bulk Feed ..... 8—p. 58

CANADA:
Canada Ban on Weed Seeds in Feed Relaxed ..... 15—p. 53
Canada Reports on Beef Cattle Testing Program ..... 8—p. 136
Canada Will Buy Pork Cuts to Support Prices ..... 22—p. 52
Feed Shipments Climb Steadily in Canada ..... 22—p. 86
Removal of Canada's Turkey Ban Sought ..... 29—p. 82

CATTLE FEEDING:
Alabama Nutrition Conference ..... 8—p. 46
Golden Era of Beef Cattle Feeding ..... 22—p. 30
Montana Cattle Field Day ..... 8—p. 70

CHEMOBIOTICS:
Dairy Calves Fed Dynafac ..... 29—p. 27
Montana Beef Cattle Field Day ..... 8—p. 70

COBALT:
New Method to Give Ruminants Cobalt ..... 22—p. 84

COCCIDIOSTATS:
Alabama Nutrition Conference ..... 8—p. 46
Anti-Worm Action Claim Permitted for Trithiadol..... 8—p. 6
Texas Event Covers Nutrition Topics of Current Interest .. 1—p. 15

COMPANIES:
Abbott Laboratories, Inc. (New Orleans Center) ..... 8—p. 123
Abbott Laboratories, Inc. (9-Month Report) ..... 15—p. 37
Allied Mills, Inc. (Universal Mills Added) ..... 1—p. 1
Allied Mills, Inc. (Adds Dog Food) ..... 8—p. 36
American Cyanamid Co. (Drug Research Grant) ..... 1—p. 72
American Cyanamid Co. (Fistula Technique) ..... 8—p. 94
American Molasses Co. (Buys Liquid Sugars, Inc.) ..... 22—p. 56
American Scientific Laboratories, Inc. (Schering Subsidiary) ..... 1—p. 8
Archer-Daniels-Midland Co. (Officers) ..... 8—p. 1
Archer-Daniels-Midland Co. (Department Represents Strong-Scott) ..... 8—p. 6
Archer-Daniels-Midland Co. (Feed Division Manager) ..... 15—p. 8
Archer-Daniels-Midland Co. (Expands Feed Operation) ..... 29—p. 1
Behlen Manufacturing Co. (Plant Expansion) ..... 8—p. 120
Blatchford Calf Meal Co. (Shirt-Sleeve Selling) ..... 8—p. 137
Blenda Life Co. (To Transfer Plant) ..... 15—p. 68
Cameron Feed Mills (Arkansas Poultry Industry) ..... 29—p. 54
Cargill, Inc. (Buys Elevator) ..... 15—p. 61
Cargill, Inc. (Iowa Soybean Storage) ..... 29—p. 50
Chase Bag Co. (Sales Branch Head) ..... 8—p. 104
Ciba Co. (Reserpine Cleared as Additive) ..... 22—p. 4
Columbian Steel Tank Co. ("Mix-O-Matic" Tank) ..... 29—p. 42
Columbine Poultry & Egg Farm (Builds Egg Factory) ..... 8—p. 118
Connecticut Farmers Cooperative Assn. (Merger) ..... 22—p. 6
Cooperative G.L.F. Exchange (Retail Stores Closing) ..... 1—p. 7
Cooperative G.L.F. Exchange (Nu-Way Promotion) ..... 8—p. 33
Cosby-Hodges Milling Co. (Safety Campaign) ..... 15—p. 107
Cosby-Hodges Milling Co. (Public Relations Program) ..... 29—p. 43
Dairy Cooperative Assn. (Negotiations Fail for Sale) ..... 8—p. 4
Dawe's Laboratories, Inc. (To Build Italian Plant) ..... 22—p. 8
Early & Daniel Co. (New Center) ..... 1—p. 8
Early & Daniel Co. (Sales Manager) ..... 8—p. 93
Eastern States Farmers Exchange (Dr. Groschke Joins Firm) 1—p. 4
Eastern States Farmers Exchange (Co-op Feed Policy) .... 22—p. 6
Eastern States Farmers Exchange (Merger) ..... 22—p. 6
Eastern States Farmers Exchange (Marketing Plant) ..... 29—p. 7
Farmers Union Grain Terminal Assn. (Feed Brand) ..... 8—p. 6
Farmers Union Grain Terminal Assn. (New Feed Division) . 29—p. 8
Frontier Chemical Co. (Fumigation Research) ..... 15—p. 68
General Mills, Inc. (Appointments) ..... 8—p. 39
General Mills, Inc. (Research Center) ..... 15—p. 53
General Mills, Inc. (Safflower Plant) ..... 29—p. 82
Hess & Clark, Inc. (Film) ..... 1—p. 82
Hess & Clark, Inc. (Furazolidone) ..... 22—p. 56
Hess & Clark, Inc. (Research Facilities) ..... 29—p. 50
Honeggers' & Co., Inc. (Flying Tours of Plants) ..... 29—p. 42
Hooker Chemical Corp. (Moves Offices) ..... 1—p. 75
Hubbard Milling Co. (President Named) ..... 22—p. 6
International Machinery Development Corp. (Sales Manager) ..... 22—p. 74
International Milling Co.—Supersweet Feeds Div. (Sales) .. 22—p. 62
International Minerals & Chemical Corp. (Phosphate Div.) 29—p. 4
Iowa Farm Bureau Federation (Plans Feed Business) ..... 22—p. 1
Kent Feeds, Inc. (Turkey Growing Plan) ..... 8—p. 7
Lilly, Eli, & Co. (Sales Report) ..... 8—p. 118
Liquid Sugars, Inc. (Bought by American Molasses) ..... 22—p. 56
Loret Feed Mill (Director of Research) ..... 8—p. 48
Lucas Products Co. (New Feed Plant) ..... 8—p. 104
McMillen Feed Mills (New Plant) ..... 1—p. 18
Manchester Rendering Co. (Feather Meal Plant) ..... 1—p. 4
Maple Leaf Milling Co. (Earnings) ..... 29—p. 49
Meyer, Wilson & Geo., & Co. (New Western Office) ..... 15—p. 42
Miller Publishing Co. (New Publication) ..... 22—p. 7
Mississippi Federated Cooperatives (Egg Program) ..... 1—p. 93
Monsanto Chemical Co. (Seeks Santoquin Okay) ..... 8—p. 6
Monsanto Chemical Co. (Arkansas Seminar) ..... 8—p. 8
National Alfalfa Dehydrating & Milling Co. (Gas Storage) 22—p. 4
New England By-Products Corp. (Drew Distributor) ..... 29—p. 42
New Hampshire Egg Producers Cooperative (Merger) ..... 8—p. 7
Nichols, Inc. (Sees Continued Growth) ..... 29—p. 51
O. K. Feed Mills, Inc. (Poultry Plant) ..... 1—p. 1
Ogilvie Flour Mills Co., Ltd. (Buyer Seeks Shares) ..... 1—p. 4
Ogilvie Flour Mills Co., Ltd. (Response to Request for Proxies) ..... 22—p. 7
Pay Way Feed Mills, Inc. (Oscar Straube Dies) ..... 15—p. 1
Peavey Feed Mills (Markets Dog Food) ..... 22—p. 87
Pfizer, Chas., & Co., Inc. (Laboratory Appointments) .... 8—p. 90
Pfizer, Chas., & Co., Inc. (Swine Feeding Contest) ..... 29—p. 8
Poultry Producers of Central California (Egg Plant) ..... 8—p. 116
Poultrymens Cooperative Assn. of Southern California (New Mill) ..... 22—p. 7
Pratt Laboratories, Inc. (Head Resigns) ..... 15—p. 49
Quaker Oats Co. (Halts West Coast Feed Operations) ... 22—p. 1
Quaker Oats Co. (Controlled Energy Ration) ..... 29—p. 6
Ralston Purina Co. (Oilseed Facilities) ..... 8—p. 1
Read, Gladwin A., Co. (Sales Agent) ..... 15—p. 65
Schering Corp. (Subsidiary) ..... 1—p. 8
Sedberry, J. B., Inc. (Expands Facilities) ..... 22—p. 68
Selma Soybean Corp. (N. C. Processing Plant) ..... 29—p. 42
Southern States Cooperative (Kentucky Bulk Delivery) ... 8—p. 90
Southern States Cooperative (Fall Beef Feed Booking) ... 8—p. 130
Southern States Cooperative (Onens Bulk Station) ..... 29—p. 59
Sprout, Waldron & Co., Inc. (Adding Fat to Pellets) ..... 8—p. 7
Staley, A. E., Manufacturing Co. (Fall Sales Program) .... 1—p. 84
Sterwin Chemicals Inc. (Claims of Anti-Worm Action) .... 8—p. 6
Stone Mountain Grit Co. (Film for Georgia) ..... 8—p. 62
Strong-Scott Manufacturing Co. (Represented by ADM) ... 8—p. 6
Strong-Scott Manufacturing Co. (Promotions) ..... 29—p. 7
Sumner Chemical Co. (Head: H. F. Roderick) ..... 29—p. 4
Teichgraeber Milling Co. (Approved for Tranquilizer Use) 1—p. 93
Tillamook County Creamery Assn. (Oregon Feed Mill) ... 8—p. 125
Universal Mills Co. (Becomes Part of Allied Mills) ..... 1—p. 1
Valley Mills (Pig Factory Plan) ..... 8—p. 133
Vineland Poultry Laboratories (West Coast Expansion) ..... 15—p. 107
Walsh Grain Co. (Vice President) ..... 29—p. 7
Washington Farmers Cooperative (Plans Fall for Purchase of Dairy Cooperative Assn.) ..... 8—p. 4
Welp's Hatchery (Feed Mill) ..... 29—p. 7
West Virginia Pulp & Paper Co. (Changes) ..... 8—p. 120
Wirthmore Feeds, Inc. (Role of Research) ..... 1—p. 10
Wirthmore Feeds, Inc. (Promotion Announced) ..... 15—p. 71
Wirthmore Feeds, Inc. (College Scholarships) ..... 29—p. 66

CONFERENCES:
Alabama Nutrition Conference ..... 8—p. 46
Cattle Feeders Field Day ..... 8—p. 70
Cornell Nutrition Conference ..... 15—p. 1; 15—p. 10
Farm Supply Marketing Conference ..... 29—p. 1
Feed Production School ..... 22—p. 10
Iowa Sheep Day ..... 8—p. 14
Nebraska Nutrition Conference ..... 8—p. 1
Oklahoma Formula Feed Conference ..... 22—p. 6
Production School ..... 15—p. 1
Small Mill Short Course ..... 29—p. 10
Swine Industry Conference ..... 15—p. 1
Tennessee Livestock Field Days ..... 29—p. 30
Texas Nutrition Conference ..... 1—p. 15
Washington Animal Industry Conference ..... 15—p. 7
Washington Poultrymens Institute ..... 22—p. 70

CONSTRUCTION:
Tillamook County Creamery Assn. (Tillamook, Ore.) ..... 8—p. 125
Welp's Hatchery (Bancroft, Iowa) ..... 29—p. 7

CONSUMPTION & PRODUCTION:
Alabama 1957-58 Tonnage ..... 15—p. 58
Colorado Sales of Commercial Feeds ..... 15—p. 82
Indiana Feed Tonnage ..... 8—p. 90
Iowa Tonnage for First Half of 1958 ..... 29—p. 74
Missouri Reports on Tonnage ..... 1—p. 17

CONTROLLED FEEDING:
Washington Meeting ..... 15—p. 7

COTTONSEED MEAL:
Use of Cottonseed Meal in Layer Feeds ..... 29—p. 42

CREDIT AND FINANCING:
Western Feed Assn. Convention ..... 29—p. 1

CUSTOM MILLING:
Offers Well Rounded Milling Service ..... 8—p. 98
Serving Time in a Custom Mill ..... 8—p. 18
Short Course ..... 29—p. 10

DAIRY FEEDING:
Alabama Nutrition Conference ..... 8—p. 46
Feed Needs of Ruminants ..... 15—p. 10
Herd Mix for Calves ..... 15—p. 91

DEHYDRATED ALFALFA:
Bullish Market for Dehy Seen ..... 22—p. 4
Dehy Disappearance ..... 1—p. 8
Golden Era of Beef Cattle Feeding ..... 22—p. 30

DISEASES:
Sinusitis Cured in Ohio Experiments ..... 8—p. 127
Swine Industry Conference ..... 15—p. 1

DRY MILK:
Dry Milk Process ..... 15—p. 104

ENERGY:
Cornell Conference ..... 15—p. 10
Interrelationships of Protein, Lysine and Energy ..... 8—p. 128
New Viewpoints in the Nutrition of Layers ..... 8—p. 40
Oklahoma Feed Conference ..... 22—p. 6
Washington Meeting ..... 15—p. 7

ENZYMES:
Enzymes in Nutrition of Baby Pigs ..... 8—p. 132
Oklahoma Conference ..... 22—p. 6
Research on Enzymes Outlined ..... 15—p. 10
Washington Meeting ..... 15—p. 7

ETHANOL:
Management, Feed Needs of Ruminants ..... 15—p. 10

EXPORTS:
Potential Use of American Feed Grains Abroad ..... 29—p. 24

FATS:
Adding Fat to Poultry Rations ..... 15—p. 38
Bigger Feed Outlets for Inedible Fats ..... 15—p. 107
Cornell Conference ..... 15—p. 10
Management, Feed Needs of Ruminants ..... 15—p. 10
Renderers' Convention ..... 8—p. 4
System for Adding Fat to Pellets ..... 8—p. 7
Turkeys Cook Better If Fed Lard ..... 15—p. 114

FEED INDUSTRY:
Relationships of Dealers, Manufacturers ..... 15—p. 4

FEED SUPPLIES:
Corn, Sorghum Grain Crop Outturns ..... 22—p. 49
Feed Concentrate Situation ..... 1—p. 98
Huge Surplus of Grain Indicated ..... 22—p. 1
Record Feed Supplies Dominate 1958-59 Outlook ..... 8—p. 1
Stocks of Feed Grains ..... 1—p. 6

FISH MEAL:
Fish Meal Production Reported ..... 1—p. 4
Fish Meal Situation Tightens ..... 29—p. 1
Maryland Broiler Trial ..... 22—p. 18

FLUORINE:
Lambs Fed Fluorine in Utah Tests ..... 15—p. 71

FUMIGATION:
Fumigation Research With Chloroform ..... 15—p. 68

FURAZOLIDONE:
Cleared for Avian Hepatitis Treatment ..... 22—p. 56

GOITROGENS:
Golden Era of Beef Cattle Feeding ..... 22—p. 30

HORMONES:
Golden Era of Beef Cattle Feeding ..... 22—p. 30
Not Factor in Finish on Beltsvilles ..... 15—p. 60

INSECTICIDE:
Montana Cattle Field Day ..... 8—p. 70

INTEGRATION & CONTRACT FARMING:
Cooperative Egg Program in Mississippi ..... 1—p. 93
Cooperatives Called Answer to Integration ..... 15—p. 106
Dealers Form Area Egg Program ..... 15—p. 101
Examples of Integration Cited ..... 15—p. 70
Integration Discussed at Bankers' Convention ..... 8—p. 29
Nebraska Convention ..... 8—p. 1
Ohio Conference ..... 29—p. 1
Programs for Swine Production ..... 29—p. 26
See Increase in Integration ..... 8—p. 144
Texas Nutrition Conference ..... 1—p. 15
Trends in the Turkey Business ..... 15—p. 44
West Coast Poultry Meeting ..... 22—p. 70
Western Feed Assn. Convention ..... 29—p. 1

LAMB FEEDING:
Iowa Sheep Day ..... 8—p. 14

LAYER FEEDING:
New Viewpoints in the Nutrition of Layers ..... 8—p. 40

LINEAR PROGRAMMING:
Future Prospects for Use of Programming (Part VII) ..... 8—p. 84
Where Should Feed Be Milled? (Part VI) ..... 1—p. 62

LIVESTOCK INDUSTRY:
Feeder Pig Production in Alabama ..... 15—p. 71
Iowa Farm Bureau Hog Marketing Plan ..... 8—p. 6

LIVESTOCK NUMBERS:
Hogs and Broilers to Pace 1959 Increase ..... 8—p. 1
USDA Cattle and Hog Outlook ..... 22—p. 1

MANAGEMENT—COMPANY:
Need for Better Management in Feed Firms ..... 29—p. 75
Problem of Labor Costs ..... 15—p. 18

MANAGEMENT—LIVESTOCK & POULTRY:
Artificial Lights Can't Fool Cows ..... 8—p. 52
Cautioned on New Lighting System ..... 15—p. 76
Changes in Poultry Housing ..... 15—p. 64
Feedlot Size Studied ..... 8—p. 126
Laying Cage Management Changes ..... 8—p. 16
Management of Layers Outlined ..... 22—p. 87
Measure Carcass Quality With Ultrasonics ..... 15—p. 80
National Swine Industry Conference ..... 15—p. 1
Pig Factory Plan ..... 8—p. 133
Results of New York Caged Layer Study ..... 8—p. 33
Trends in the Turkey Business ..... 15—p. 44
Unique Broiler Equipment, House ..... 8—p. 132

MEAT AND BONE MEAL:
Maryland Broiler Trial ..... 22—p. 18

MEDICATED FEED:
Education Program on Medicated Feeds ..... 29—p. 1

MERCHANDISING:
Customers Are Important ..... 1—p. 50
Illinois Feed Convention ..... 15—p. 6
Merchandising Bulk Feed ..... 8—p. 58
Offers Customers Well Rounded Service ..... 8—p. 98
Public Relations Program ..... 1—p. 73

METHIONINE:
Methionine Supplementation of Laying Hen Feeds ..... 15—p. 22

MINERALS:
Golden Era of Beef Cattle Feeding ..... 22—p. 30

MOBILE MILLING:
Offers Well Rounded Milling Service ..... 8—p. 98

NITROFURANS:
Texas Nutrition Conference ..... 1—p. 15

PELLETING:
Animals Eat More of Pelleted Rations ..... 29—p. 58
Coastal Bermuda Pellet Tests ..... 15—p. 92
Farmers Indicate Interest in Field Pelleters ..... 15—p. 8
Feed Pelleting Experiments Reviewed ..... 15—p. 10
Iowa Sheep Day ..... 8—p. 14
Mill Short Course ..... 29—p. 10
Mobile Pelleting Mill ..... 15—p. 56
Oklahoma Conference ..... 22—p. 6
Pelleting and Acceptance of Semi-Purified Rations ..... 29—p. 17
Producing Complete Pelleted Rations for Ruminants ..... 8—p. 64
Production School ..... 29—p. 10
System for Adding Fats to Pellets ..... 8—p. 7
Where to Get 'Em [editorial] ..... 8—p. 2

PHOSPHATE:
Availability of Vitamin A and Carotene as Influenced by Soft Phosphate ..... 1—p. 14
Montana's Cattle Field Day ..... 8—p. 70

POLYBOR:
Alabama Nutrition Conference ..... 8—p. 46

POTASSIUM:
Cornell Conference ..... 15—p. 10

POTATOES:
Potatoes Fed to Steers in Oregon Experiment ..... 8—p. 96

POULTRY BY-PRODUCTS MEAL:
Maryland Broiler Trial ..... 22—p. 18

POULTRY INDUSTRY:
Arkansas Poultry Industry ..... 29—p. 54
Delmarva Plan for Boosting Broiler Quality ..... 1—p. 84
Diversified Farmer in Producing Eggs ..... 15—p. 76
Formation of New England Egg Group ..... 8—p. 120
Georgia Egg Output Rising Fast ..... 22—p. 74
New England Turkey Industry ..... 1—p. 42
Outlook for West Coast Poultry Industry ..... 22—p. 70
Poultry Promotion Referendum Fails ..... 15—p. 113
Southern Egg Production ..... 8—p. 11
Trends in the Turkey Industry ..... 15—p. 44
2 Million Eggs Handled Daily at Processing Plant ..... 8—p. 116
Virginia Poultry Federation ..... 8—p. 113

POULTRY NUMBERS:
Broiler Hatchery Supply Placements ..... 1—p. 6
Chick Production Up 12% ..... 22—p. 4
Hogs and Broilers to Pace 1959 Livestock Increases ..... 8—p. 1
Laying Flock Jan. 1 to Be Up 2 to 3% ..... 22—p. 8
More Turkey Breeder Hens Expected ..... 1—p. 1
Sees Turkey Increased Production in 1959 ..... 1—p. 1
Turkey Poult Output Up ..... 22—p. 7

PRODUCTION & MILL OPERATIONS:
Bulk Handling of Finished Feed ..... 8—p. 30
Complete Pelleted Rations for Ruminants ..... 8—p. 64
Information and Advice on Bulk Handling ..... 22—p. 10
Methods of Adding Fat to Poultry Rations ..... 15—p. 38
Midwest Production School ..... 15—p. 1
Milling Service ..... 8—p. 98
New "Auto-Syntronic" Plant ..... 1—p. 18
Serving Time in a Custom Mill ..... 8—p. 18
Short Course for Small Mill Operators ..... 29—p. 10
Speakers Cover Pelleting, Other Operations ..... 29—p. 10
System for Adding Fats to Pellets ..... 8—p. 7
Use of Programming in Solving Mill Problems ..... 8—p. 84

PROTEIN:
Golden Era of Beef Cattle Feeding ..... 22—p. 30
Interrelationships of Protein, Lysine and Energy in Diets for Growing Swine ..... 8—p. 128
New Viewpoints in Nutrition of Layers ..... 8—p. 40
Renderers' Meeting ..... 8—p. 4

REGULATORY:
Georgia "Retaliates" Against Florida Rules ..... 29—p. 82
Proposed Rules Under Additives Law ..... 29—p. 1
Seek Okay on Santoquin Under New FDA Law ..... 8—p. 6
Survey on Custom Mixing of Drugs ..... 1—p. 7
To Seek Revised Iowa Tonnage Tax Law ..... 29—p. 1

RESTRICTED FEEDING:
New Viewpoints in the Nutrition of Layers ..... 8—p. 40
Quaker Oats Controlled Energy Ration ..... 29—p. 6
Texas Nutrition Conference ..... 1—p. 15

SACCHARIN:
Iowa Compares Sugar, Saccharin for Pigs ..... 8—p. 88

SALT:
Tests Define Salt Poisoning in Pigs ..... 15—p. 107

SELENIUM:
Effects of Selenium and Vitamin E on White Muscle Disease ..... 22—p. 61
Research on Selenium Outlined ..... 15—p. 10

SERVICE:
Service Is Essential for Feed Success ..... 1—p. 38

STILBESTROL:
Tennessee Livestock Feeding Studies ..... 29—p. 30
Value of Reimplanting Stilbestrol Noted ..... 1—p. 83

SUGAR:
Iowa Compares Sugar, Saccharin for Pigs ..... 8—p. 88

SWINE FEEDING:
Alabama Nutrition Conference ..... 8—p. 46
Florida Nutrition Conference ..... 15—p. 4
Gain Best on Complete Mixed Ration ..... 15—p. 60
Management, Feed Needs of Swine ..... 15—p. 10
National Swine Industry Conference ..... 1—p. 1
Oklahoma Conference ..... 22—p. 6
Washington Conference ..... 15—p. 7
Texas Nutrition Conference ..... 1—p. 15

TRANQUILIZERS:
Effect of Tranquilizer on Cows Insignificant ..... 15—p. 72
Maryland Broiler Trial ..... 22—p. 18
Nebraska Conference ..... 8—p. 1
Reserpine Cleared as Feed Additives in Canada ..... 22—p. 4
Tranquilizers Tested on White Leghorns ..... 29—p. 60

TRANSPORTATION:
Increase in Truck Shipment of Grain ..... 8—p. 52
Says Grain Marketing System Breaking Down ..... 8—p. 48
Soybean Meal Pellets Move on Great Lakes ..... 22—p. 1
USDA Starts Grain Transport Study in Midwest ..... 1—p. 4

TURKEY FEEDING:
Oklahoma Conference ..... 22—p. 6
Texas Nutrition Conference ..... 1—p. 15

UNIDENTIFIED FACTORS:
Maryland Broiler Trial ..... 22—p. 18
Texas Conference ..... 1—p. 15
Washington Meeting ..... 15—p. 7

UREA:
Golden Era of Beef Cattle Feeding ..... 22—p. 30

VITAMINS:
Availability of Vitamin A and Carotene as Influenced by Soft Phosphate ..... 1—p. 14
Cornell Conference ..... 15—p. 10
Effect of Supplemental Vitamin D in Rations for Pigs ..... 8—p. 129
Effects of Selenium and Vitamin E on White Muscle Disease ..... 22—p. 61
Golden Era of Beef Cattle Feeding ..... 22—p. 30
Vitamin E Deficiency in Baby Pigs ..... 15—p. 42

ZINC:
Cornell Conference ..... 15—p. 10

It's DANNEN for GRAIN and FEED INGREDIENTS

- Bran
- Shorts
- Linseed Meal
- Cottonseed Meal
- Soybean Oil Meal
- Meat Scraps
- Sugar
- Defluorinated Phosphate
- Feed Supplement Urea
- Dried Skim Milk
- Dried Buttermilk

DANNEN

DANNEN MILLS, INC.

Grain and Jobbing Division
St. Joseph, Mo.
Phone: Adams 3-6161

To all our JOBBERS DEALERS and FRIENDS In the Industry

We extend sincerest wishes for a Happy Holiday Season

Your continued loyal support of our many products over the years has been very gratifying and we wish everyone

A MOST PROSPEROUS NEW YEAR

RYDE & CO.

3939 So. Union Ave.
Chicago 9, Illinois

Convention Calendar

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear ahead of the ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

• • •

Jan. 29—New Jersey Feed Industry Assn.; Hotel Stacy Trent, Trenton; pres., I. Lintner, P. O. Box 88, Somerville, N.J.

Feb. 24—Ohio Broiler and Market Egg School; Agricultural Administration Building, Ohio State University, Columbus, Ohio; chm., P. C. Clayton, Extension Poultryman.

May 10-12 — National Cottonseed Products Assn.; Mark Hopkins and Fairmont Hotels, San Francisco; sec., John F. Moloney, 43 N. Cleveland St., Memphis, Tenn.

June 1-2—Central Retail Feed Assn.; Hotel Schroeder, Milwaukee; sec., Eldon H. Roesler, 1712 W. St. Paul Ave., Milwaukee, Wis.

June 25-27—Canadian Feed Manufacturers Assn.; Bigwin Inn, Lake of Bays, Ontario; N. D. Hogg, Box 66, Station Q, Toronto, Ont.

Sept. 16-17—National Feed Ingredients Assn.; Pick-Congress Hotel, Chicago, Ill.; sec., Peter W. Janss, 212 Equitable Bldg., Des Moines, Iowa.

• • •

1959

Jan. 5-6 — Kansas Formula Feed Conference; Kansas State College, Manhattan, Kansas; chm., Dr. Tom Avery, Poultry Department.

Jan. 6-7—Elevator Business Managers Clinic, Michigan State University, Kellogg Center, East Lansing, Mich.; chm., Earl H. Brown.

Jan. 6-8—National Turkey Federation Convention and Exposition; Veterans Auditorium, Des Moines, Iowa; sec., M. C. Small, P.O. Box 69, Mt. Morris, Ill.

Jan. 9-10 — Kansas Seed Dealers Assn.; Hotel Broadview, Wichita; sec., O. E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

Jan. 11-13—Northwest Retail Feed Assn.; Hotel Pick-Nicollet, Minneapolis; sec., W. D. Fleming, 112 Grain Exchange Bldg., Minneapolis, Minn.

Jan. 18-20—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis, Ind.; sec., Fred Sale, 600 Board of Trade Bldg., Indianapolis 4, Ind.

Jan. 20—Nevada Feed Conference; University of Nevada, Reno, Nev.

Jan. 20-21—North Dakota Poultry Industries Convention; Elks Club, Fargo, N.D.; chm., B. J. Duke, North Dakota Poultry Improvement Board, Bismarck, N.D.

Jan. 22-24—New Mexico Grain & Feed Dealers Assn.; Hilton Hotel, Albuquerque; sec., Parley Jensen, Box 616, Albuquerque, N.M.

Jan. 26-28 — Southeastern Poultry & Egg Assn., Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Jan. 27-28—Agricultural Industries Forum; University of Illinois, Urbana; Harold G. Halcrow, Agricultural Economics Department.

Jan. 28-30—American Dehydrators Assn., Shamrock-Hilton Hotel, Houston; exec. vice pres., Joseph Chrisman, Board of Trade Bldg., Kansas City 5, Mo.

Jan. 29-30—Oregon Animal Industry Conference; Oregon State College, Corvallis; sponsored by Oregon State College and Oregon Feed & Seed Dealers Assn.; sec., Russ Hays, 702 Lewis Bldg., Portland, Ore.

Jan. 31 — Connecticut Regional Swine Producers Day; University of Connecticut, Storrs; Donald M. Kinsman, Animal Husbandry Dept.

Jan. 31—Regional Swine Producers Day; Ratcliffe Hicks Bldg., University of Connecticut, Storrs, Conn.

Feb. 6-7—Minnesota Turkey Growers Assn.; Leamington Hotel, Minneapolis; sec., A. E. Eisenmenger, 2200 University Ave., St. Paul, Minn.

Feb. 4 — Illinois Feed Nutrition Conference; Illini Union Ballroom, University of Illinois, Urbana; chm., Dr. Harold H. Draper, Animal Science Dept.

Feb. 9-10—Montana Nutrition Conference; Montana State College, Bozeman, Mont.; chm., Dr. O. O. Thomas, Animal Industry Dept.

Feb. 11-12 — Feed Mill Production School; Leopold Hotel, Bellingham, Wash.; sponsored by Washington State Feed Assn.; mgr., J. G. Wilson, 814 Second Avenue Bldg., Seattle, Wash.

Feb. 12-13—Utah Feed Manufacturers & Dealers Assn. Nutrition Conference; Brigham Young University, Provo; sec., Dr. Lawrence Morris, Brigham Young University, Provo, Utah.

Feb. 12-13 — Washington State Feed Assn.; Leopold Hotel, Belling-

CALENDAR FOR 1958-59

DECEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JANUARY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

MARCH

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

APRIL

S	M	T	W	T	F	S
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

MAY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

JULY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

AUGUST

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

SEPTEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

OCTOBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

SIX VITAL POINTS

IN A GOOD

TURKEY INSURANCE PROGRAM

•

ARE YOU COVERED ON ALL SIX?

1.—Lowest Rates.

2.—Broad Coverage.

3.—Financially Strong Old-Line Company.

4.—Unexcelled Loss Service and Supervision.

5.—Simplification of Procedure and Elimination of Time-Consuming Details.

6.—Complete Supervision by One Experienced, Established Agency Specializing in This Coverage.

We Offer the Outstanding Program of Turkey Coverage Today. Call or Write for Details

Altman·Singleton & Co.

ALL FORMS OF INSURANCE AND SURETY

15 W. 10TH STREET • KANSAS CITY, MISSOURI • Victor 2-6292

Complete Facilities for Insuring Chicken Broilers, Pullets, Layers and Breeders

Broad Coverage — Low Rates

K

Water soluble

Rapidly absorbed

Fast, effective protection against hemorrhagic disease

Economical

Completely stable potency

*U.S. Patents 2,331,808 & 2,367,302

Dept. FS-1227

Please rush complete information on Hetrogen K and latest reports on Vitamin K research.

Firm Name _____

Individual _____

Address _____

Hetrogen K is available as an easy to use premix and as a free flowing concentrate. Recommended for medication of drinking water. For complete information, write or call collect:

HETEROCHEMICAL CORPORATION, 111 E. Hawthorne Avenue, Valley Stream, Long Island, N. Y. • LOcust 1-8225

ham; mgr., J. G. Wilson, 814 Second Avenue Bldg., Seattle, Wash.

Feb. 13-15—Institute of American Poultry Industries' Fact Finding Conference; Municipal Auditorium, Kansas City, Mo.; Institute of American Poultry Industries, 59 E. Madison, Chicago 2, Ill.

Feb. 16-18—Farmers Elevator Association of Minnesota; Hotel Nicollet, Minneapolis, Minn.; sec., Lloyd A. Nelson, Lumber Exchange Bldg., Minneapolis.

Feb. 16-18—Midwest Feed Manufacturers Assn., annual convention, Muehlebach Hotel, Kansas City, executive vice president, Lloyd Larson, 20 West Ninth St., Kansas City, Mo.

Feb. 22-24—Colorado Grain, Mill & Feed Dealers Assn.; Shirley Savoy Hotel, Denver, Colo.; sec., Olaf Erickson, 714 Cooper Bldg., Denver 2, Colo.

Feb. 23-26 — Colorado Livestock Days; Colorado State University, Ft. Collins, Colo.; chm., Dr. Lamar Esplin.

Feb. 24-25—Virginia Feed and Nutrition Conference; Hotel Roanoke, Roanoke, Va.; co-chm., Wm. G. Ritchie, J. S. Ritchie & Sons, Petersburg, Va., and Paul M. Reaves, professor Dairy Science, Virginia Polytechnic Institute, Blacksburg, Va.

Feb. 26—Illinois State Turkey Growers Assn.; Animal Sciences Laboratory, University of Illinois, Urbana, Ill.; sec., S. F. Ridlen, Poultry Extension Specialist.

March 1-3 — Ohio Grain & Feed Dealers Assn., Inc.; Neil House, Columbus, Ohio; sec., G. E. O'Brien, 710 N. Ohio Street, Greenville, Ohio.

March 19-20—Oregon Feed & Seed Dealers Association; Multnomah Hotel, Portland; sec., Russ Hays, 702 Lewis Bldg., Portland 4, Ore.

March 19-20—Maryland Nutrition Conference; Shoreham Hotel, Washington, D.C.; chm., Dr. Richard D Creek, Poultry Husbandry Department, University of Maryland, College Park, Md.

March 25—Distillers Feed Conference; Sheraton Gibson Hotel, Cincinnati; sponsored by Distillers Feed Research Council; exec. director, Dr Lawrence E. Carpenter, 1232 Enquirer Bldg., Cincinnati 2, Ohio.

April 2-4—Pacific Dairy & Poultry Assn.; Coronado, Cal.; sec., Carl E Nail, 1304 E. 7th St., Los Angeles.

April 12-15—National Fisheries Institute; Hotel Commodore, New York City; asst. gen. mgr., Mal Xavier, 1614 20th St. N.W., Washington 9, D.C.

April 8—Purdue Egg Day; Purdue University, Lafayette, Ind.; sec., David D. Jackson, extension poultryman, Purdue University.

April 12-17—Grain Elevator & Processing Superintendents; Multnomah Hotel, Portland, Ore.; sec., Dean M. Clark, 1120 Board of Trade Bldg., Chicago 4, Ill.

April 23-25 — Joint Convention, Texas dealer and manufacturer groups; Hotel Texas, Ft. Worth; Texas Grain & Feed Dealers Assn., sec., Ben M. Ferguson, 614 Meacham Bldg., Ft. Worth; Texas Feed Manufacturers Assn., sec., Ben E. Schmitt, 3421 Park Ridge Blvd., Ft. Worth.

April 30-May 2—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., O. E. Case, 901 Wiley Bldg., Hutchinson, Kansas.

May 8-10 — Grain Processing Machinery Manufacturers Assn.; Chicago; sec., Raymond J. Walter, 511 Fifth Ave., New York 17, N.Y.

May 11-13—American Feed Manufacturers Assn. Convention and National Feed Industry Show; Conrad Hilton Hotel, Chicago; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 4, Ill.

May 15-16—Missouri Grain, Feed & Seed Assn.; Hotel Governor, Jefferson City, Mo.; sec., D. A. Meinershagen, Higginsville, Mo.

June 7-9—Indiana Grain & Feed Dealers Association; Sheraton Hotel, French Lick, Ind.; sec., Fred Sale, 600 Board of Trade Bldg., Indianapolis, Ind.

June 7-9 — Eastern Federation of Feed Merchants, Pocano Manor Inn, Pocano Manor, Pa.; sec., Austin W. Carpenter, Sherburne, N.Y.

June 8-10—Alabama Poultry Industry Assn.; Municipal Auditorium, Birmingham; exec. sec., W. L. Walsh, P.O. Box 567, Montgomery, Ala.

June 9-10—Association of Southern Feed and Fertilizer Control Officials; Velda Rose Motel, Hot Springs, Ark.; sec., Maurice B. Rowe, Virginia Dept. of Agriculture, 1123 State Office Bldg., Richmond, Va.

July 10-14 — Georgia Feed Assn.; General Oglethorpe Hotel, Savannah, Ga.; sec., Will L. Kinard, 3240 Peachtree Rd. Bldg., Atlanta 5, Ga.

Sept. 13-14—Grain and Feed Dealers National Assn. (work meeting for directors, committees and members), Minneapolis; exec. v. pres., Alvin E. Oliver, 400 Folger Bldg., Washington 5, D.C.

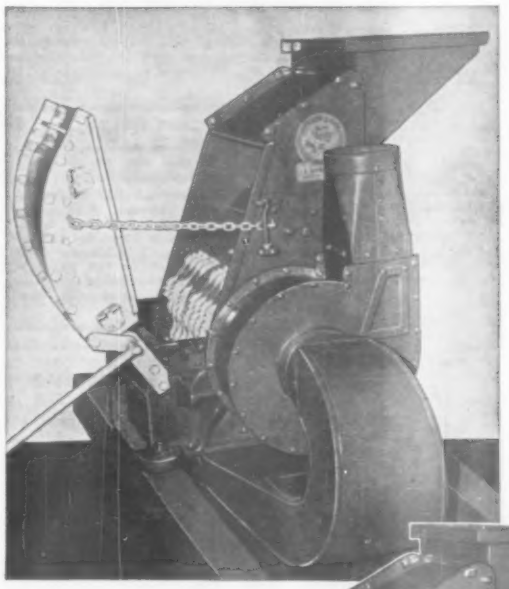
Oct. 6-8 — Northeastern Poultry Producers Exposition; Farm Show Building, Harrisburg, Pa.; sec., Dr. Alfred Van Wagenen, 10 Rutgers Place, Trenton 8, N.J.

Oct. 7-9—Texas Nutrition Conference; Texas A & M College, College Station; chm., Dr. J. R. Couch, Department of Poultry Science.

Oct. 14 — Animal Nutrition Research Council; Shoreham Hotel, Washington, D.C.; sec., Irwin Olcott, Dawe's Laboratories, Inc., 4800 S. Richmond St., Chicago 32, Ill.

VAN DUSEN HARRINGTON
DIVISION
F. H. Peavey & Co.
GRAIN SOYBEANS FLAX
Founded 1852
MINNEAPOLIS Pv DULUTH

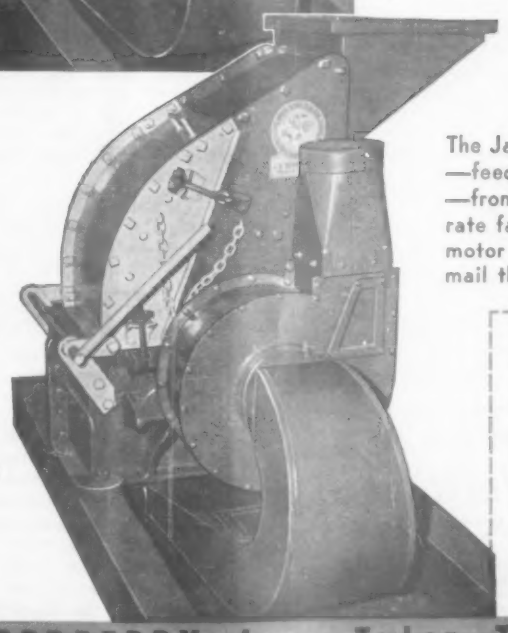
HIGH CAPACITY . . .
TOP QUALITY GRIND . . .
LOW-COST, TROUBLE-FREE OPERATION . . .
LONG LIFE . . .
JAY BEE
Are All "Built Into" the Heavy Duty
Model W "Split Top" Hammermill



As shown here, the Model W's "split top" gives you instant, easy access to screen and hammers without disturbing the feeding set-up—a particular convenience when the mill is working with any continuous feeding method.

And every Jay Bee gives you "Texture Grind"

Horsepower for horsepower, screen for screen, Jay Bee Hammermills are unexcelled for their consistently uniform texture of grind.



Let us tell you about Sedberry's complete feed mill installation service—every step from plan to production

The Jay Bee Model W is available in three sizes —feed opening from 15½" x 12" to 26" x 12" —from 50 to 200 H.P.—with or without separate fan motor—with flat belt, V belt, or direct motor drive. . . . For complete information just mail the coupon below.

J. B. SEDBERRY, Inc., Dept. F, Franklin, Tenn.
Please send me complete information about the
☐ Jay Bee Model W "Split Top" Hammermill
☐ Your complete mill installation service
Name .....
Company .....
Street or Box .....
City..... Zone... State.....

J. B. SEDBERRY, Inc., Tyler, Texas • Franklin, Tenn.

COLUMBIA
SOFT PHOSPHATE
IMMEDIATE DELIVERY
LOW COST
WRITE FOR INFORMATION
Columbia Phosphate Co.
1007 Washington St. Louis, Mo.
COLUMBIA PHOSPHATE CO. PHOSPHATE PRODUCTS

Arbor Acres
Make sure
Your broilers come from
ARBOR ACRES females!

☆ Classified Ads ☆

Classified advertisements received by Tuesday each week will be inserted for the issue of the following Saturday. Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Display advertising accepted for insertion at minimum rate of $10.50 per column inch. All Want Ads cash with order.

MACHINERY FOR SALE

CHAMPION MOBILE GRINDER AND mixer units. Champion Portable Mill Co., 2106 Como Ave., Minneapolis 14, Minn.

ATTENTION ALFALFA DEHYDRATORS— Airplane tires and wheel assemblies to fit wagons, trailers and field choppers. Hey Machinery Co., Baldwin, Kansas.

FEED MIXER, 1-TON CAPACITY, GUARanteed first-class throughout, 5 H.P. motor drive. Address Ad No. 3479, Feedstuffs, Minneapolis 40, Minn.

WHIRLAWAY AIRBLAST CAR LOADERS, cast iron pulleys, new and used feed and elevator equipment. Hagan Mill Machinery, P. O. Box 574, Jeffreson City, Mo.

ANDERSON SUPER DUO EXPELLER— Excellent condition, late model, complete with motors, 36" cooker, conditioner, controls, etc. E. M. Sholle, 7592 Akron, Cleveland Road, Hudson, Ohio.

FOR SALE—NEVER USED ERIEZ 20"x32" magnetic pulley; 7,500 lb. Double Ribbon Blender. Best Equipment Co., 1737 W. Howard Street, Chicago 26, Ill.; AMbassador 2-1452.

FOR SALE—ENCLOSED MOTORS; RICHardson Scales; truck scales; hammermills; oat crimpers; horizontal and upright feed mixers; sewing machines; elevator legs; screw conveyors; molasses mixers and pellet mills. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

NEW 75 H.P. G.E. "TRY-CLAD" electric motor, 220-440 volt, 3-phase, 3,600 R.P.M. Also 100 H.P. G.E. reduced voltage starter, and ammeter, with entrance switch. New vertical twin batch mixer, 4,000 lb. capacity. Big discount. W. H. Scribner, 5616 Grant St., Omaha, Neb.

RECONDITIONED AND GUARANTEED— self unloading bulk feed delivery bodies. Some truck mounted. Reconditioned our shops. U. E. Fitzpatrick & Co., Feedmaster Bulk Feed and Grain Systems, Burket, Ind.; Phone CY. 1-2435.

36" BAUER BROS. ATTRITION MILL with (2) 50 H.P. motors, complete with controls; 15 H.P. blower unit and collector, good shape. $1,650. Quad States Equipment Co., P.O. Box 2508, South Des Moines 15, Iowa.

LATE MODEL HOWES BLENDER, COMplete with enclosed motors, pump, heater, meter and screw conveyor. One-ton feed mixers, five to choose from. All above equipment taken in trade on the new Blend-All feed mixer and are in good condition. Shoup Engineering Co., 205 S. Willow St., Kent, Ohio.

SALE — ALUMINUM TANKS, 4,000 GAL., 2,100 gal.; Spiral Ribbon Mixers 200, 75 cu. ft.; Dewatering presses: Davenport No. 1A, No. 2A, No. 3A, Louisville 8-roll 36"; six Louisville Rotary Steam Tube Dryers 6'x50', 6'x30', 6'x25'; screw conveyor, trough belt conveyor, bucket elevator, bins, etc. Perry, 1403 N. 6th St., Philadelphia 22, Pa.

A COMPLETE LINE OF CONVEYORS, stackers, bucket elevators and other equipment for the feed and grain industries. Also motors, transmission equipment and conveyor belting. Ask for free catalog of the finest used and close-out models at bargain prices. Immediate delivery. Bonded Scale and Machine Co., 124 Bellevue, Columbus 7, Ohio, Phone: HI. 4-2186.

COMPLETE LINE OF SUNCURED GRINDing equipment including 24" Fords hammermill with 100 H.P. motor, 24" bale shredder, Kelly Duplex mixer, molasses mixer with tank and pump, Minneapolis Sewing Machine scales and many other motors and equipment. Also business for sale. May be bought separately or with equipment. Address Ad No. 4375, Feedstuffs, Minneapolis 40, Minn.

EQUIPMENT FOR SALE BY UNCLE Johnny's Feeds. Good condition: 17 Merchen Feeders type C, 25 lb. to 400 lb. per min.; two B. F. Gump old style bag settlers (Vibrox); one No. 37061 Richardson air-electric bag settler; one No. 3000 S. Howes horizontal mixer with 10 H.P. 220/440 volt dust-proof motor with all electric control; one model E-50 Richardson bagging scale with manual bag clamp; one model No. 2 Eureka knife grinder; one No. 5A Richmond Gyro Whip sifter; one No. 5 Fairbanks standard floor scale; three 42-in. fans, 110-volt motor; one 48-in. fan, 220 volt motor; four No. 14500 Union Special sewing machine heads; one Westinghouse type G, ½ H.P. air compressor. Fair condition: eight platform scales, 1,000 lb. capacity; one model C-20, 20 ft. Elton chain type conveyor (bag stacker); one No. 2A Eureka cereal cutter with motor, starter and drive; one No. 2 Eureka cereal cutter with motor, starter and drive; one Richardson (3 bu.) grain scale; one Richardson (3 bu.) grain scale with sacking attachment. Poor condition: One Richardson (3 bu.) grain scale. Uncle Johnny's Feeds, P. O. Box 236, Houston 1, Texas; Phone Fairfax 3-3181.

MISCELLANEOUS

FEED GRAINS: BARLEY, OATS, CORN, alfalfa meal. Truck shipping only. All truckers and buyers welcome. B. W. Goetz Brokerage, Route 1, Lindsey, Ohio; Phone MO 5-2442.

SITUATIONS WANTED

MANAGER RETAIL, MATURE, AGRICULtural college graduate, detail minded. Can handle records, credit, purchasing, selling, production, personnel. Experienced at all managerial levels. Address Ad No. 4368, Feedstuffs, Minneapolis 40, Minn.

MATURE, QUALIFIED TERRITORY MANager, 20 years' top sales related feed item. Car, truck load sales—Indiana, Michigan. Seeking better opportunity. Good references. Address Ad No. 4354, Feedstuffs, Minneapolis 40, Minn.

ADMINISTRATIVE POSITION, AGRICULtural college graduate. Experienced in buying, selling, personnel, transportation, inventories, credit, grain, advertising, office and retail management. Good versatile man for medium sized business. Address Ad No. 4369, Feedstuffs, Minneapolis 40, Minn.

NO GREY-FLANNEL HEAD — JUST 12 years' heavy firing-line experience with national and regional feed, chemical, and equipment companies on both agency and company sides of the desk. Creative in all media, experienced marketing, merchandising, sales, through dealers and distributors. Family man, mature, college. Well connected, well recommended, well worth your inquiry. Want challenging position with solid company. Address Ad No. 4395, Feedstuffs, Minneapolis 40, Minn.

HELP WANTED

WANTED—EXPERIENCED, AGGRESSIVE feed salesman for northeastern Maryland and northern Delaware. Sherwood Feed Mills, Inc., 500 President St., Baltimore 2, Md.

WANTED—GRAIN ELEVATOR MANAGER —must know blending and be experienced in handling all grains. 500,000 bushel capacity. Age to 55. Must relocate southern Indiana. Salary commensurate with experience. Address Ad No. 4384, Feedstuffs, Minneapolis 40, Minn.

EXCELLENT SIDELINE OR FULL TIME item for salesman selling to feed, grain, farm equipment dealer and farmers. Liberal commissions. Replies will be held confidential. Write Doane Agricultural Service, Inc., St. Louis 5, Mo.

OPENING — ARIZONA GRAIN HOUSEman, 30-35 age bracket. Assistant to general manager. Experienced in grain storage and marketing. Knowledge fertilizer and insecticide business helpful. Co-op background acceptable. Reply Ad No. 4373, Feedstuffs, Minneapolis 40, Minn.

SALESMEN WANTED—MEN CALLING ON feed dealers and elevators to carry well-established calf milk replacer as side line. Top commissions for the right men. Several established territories open. Write Box 5020, Minnehaha Station, Minneapolis, Minn.

AGGRESSIVE MAN TO SELL FEED IN north-central Minnesota. An opportunity for a well-disciplined hard-working man to earn good money. Small, well-known company, good territory, liberal commission and bonus, competitive priced feeds, gives the right man an excellent chance. Write Box 308, Mankato, Minn.

ASSISTANT TO TRAFFIC MANAGER needed. Good opportunity for aggressive young man with progressive Midwest feed manufacturer. Knowledge of transit necessary. Submit complete resume of education, experience, personal background, and salary required. Replies held confidential. Address Ad No. 4383, Feedstuffs, Minneapolis 40, Minn.

FEED MILL SUPERINTENDENT — MAN of young or middle age to take complete charge of feed production. Mill capacity 100 tons per eight hours. Your application should contain personal history, salary requested, education, business resume and references. Applications will be held strictly confidential. Our employees know of this advertisement. Address Box 4390, Feedstuffs, Board of Trade Building, Kansas City, Mo.

WANTED BY BUSY NEW ORLEANS FIRM a traffic man (RR) who also has experience in trading as jobber in grains. Will also consider an inexperienced man who has a leaning in those directions. This job offers the chance to advance. Salary commensurate with ability. Please write in detail concerning yourself and your experience and state salary required. New Orleans Grain & Feed Co., Inc., P. O. Box 905, New Orleans, La.

WANTED
Nutritionist

National manufacturer of vitamins needs nutritionist for its technical staff. College essential. Advanced degree desirable but not required. Salary dependent upon training and experience. Midwest location. Moderate travel. Retirement, insurance and other benefits. All replies confidential. Address Ad No. 4372, Feedstuffs, Minneapolis 40, Minn.

HELP WANTED

WANTED — ASSISTANT SUPERINTENDent for medium sized dry corn mill in nationally known expanding organization. Middle West location. Address Ad No. 4385, Feedstuffs, Minneapolis 40, Minn.

SALES MANAGER WANTED — QUALIfied, experienced man. Age 30 to 45 to head young, aggressive feed organization. Excellent opportunity for advancement. Salary open. Address Ad No. 4382, Feedstuffs, Minneapolis 40, Minn.

HELP WANTED — PROGRESSIVE AND expanding feed processor desires high caliber salesman or manufacturer's agent to sell our line of feed ingredients to feed mills in Southeast. We would prefer salesman who would be carrying items to sell to the feed mills in addition to ours. Excellent commission basis. Address Ad No. 4372, Feedstuffs, Minneapolis 40, Minn.

MACHINERY WANTED

MONITOR 5C COMPOUND WAREHOUSE separator. Puritan molasses mixer. Myers & Clark, Ashland, Ky.

WANTED—USED PELLET MILL. Robnett's Egg Farm, 2507 54th, Lubbock, Texas.

ALL KINDS OF GOOD USED GRAIN processing machinery. E. H. Beer & Co., Inc., Baltimore 2, Md.

WANTED TO BUY — RICHARDSON scales, bag closing machines and other good mill, feed and elevator equipment. J. E. Hagan Mill Machinery, Jefferson City, Mo.

BUSINESS OPPORTUNITIES

FOR SALE — EGG PRODUCTION FARM, commercial. Capacity 9,000 laying hens. Completely equipped with oil fired hot water boilers, automatic feeders and waterers, refrigerated egg rooms, two modern dwellings. 66 acres land located 80 miles west of Chicago. Owner lives out of state. Can be purchased for less than half replacement cost. Attractive lease-purchase terms can be arranged. Address Ad No. 4397, Feedstuffs, Minneapolis 40, Minn.

CHOICE PLANT SITE ON CHESAPEAKE BAY

Property has R.R. spur and barge slip— on east coast of Chesapeake Bay.

Includes large building suitable for manufacturing plant or warehouse. Also warehouse building and office building. Overhead crane and large storage area. Approximately eight acres. Suitable for feed manufacturing, soya bean or fish processing plant. For further information and details write Ad No. 4381, Feedstuffs, Minneapolis 40, Minn.

Supplements Improve Gramma Grass Ration

STATE COLLEGE, N. M. — Addition of supplements to a diet of blue gramma grass fed to sheep in New Mexico increases digestibility of all nutrients except the crude grass fiber.

This was the main conclusion reached by W. E. Watkins and Dr. W. W. Repp of the animal husbandry department of the New Mexico A&M College Experiment Station after extensive tests.

They note that in the winter and early spring the quality of blue gramma grass hay in New Mexico is much lower than at other seasons, and supplements are needed to supply protein, energy, and phosphorus during the winter and early spring.

In the tests, they fed cottonseed meal, sorghum grain, bone meal, and alfalfa hay as supplements with the native blue gramma hay ration. The results showed that apparent digestibility of all the nutrients, with the exception of the crude fiber, was increased by the supplements.

They report their findings in "Bulletin 424: Effect of Various Feed Supplements on Roughage Digestion in Sheep" which may be obtained by writing to the department of information. New Mexico A&M College, State College.

Minneapolis Grain Commission Merchants Group Against Changes

MINNEAPOLIS — Proposed changes in the federal standards for corn and oats are opposed by the Minneapolis Grain Commission Merchants Assn., and the association has gone on record against them.

"Many of these test weight proposals are most unrealistic as far as normal expectancy of crop production in this area is concerned," Robert A. Morken, Hallet & Carey Co., president of the association, told officials at a hearing in the Minneapolis Grain Exchange building.

"The Commodity Credit Corp.," Mr. Morken said, "has stated that in recent months they have had to make an abnormal return of country tickets to country warehousemen for correction as to grade factors. We, who represent the majority of farmer elevator and independent elevator shippers in the Upper Midwest and who are the largest single group receiver in the Minneapolis, St. Paul, Duluth and Superior markets, know from our own experience that recent grade changes, particularly on wheat and barley, have been the prime contributing factor to this problem."

Mr. Morken pointed out: "All our customers have a stake in the possible loss of premiums for the assessment of additional discounts by CCC on loading order settlements."

Country warehousemen, in agreeing to the Uniform Grain Storage Agreement, Mr. Morken said, accept responsibility for placing correct grades on hundreds of storage tickets that are written every year for each of their customers. He said this is a most acute problem with every warehouseman, particularly when hundreds of loads of grain are moving each day and actual hand picking of each load is a practical impossibility.

"Yet," Mr. Morken declared, "as a liability on the warehouseman, if he neglects to show in addition to a test weight factor, other pertinent grade factors . . . he takes a loss and in many cases a substantial one.

"The warehouseman is saddled with enough present grade problems without adding to his difficulties by further changes as proposed," Mr. Morken concluded.

Washington Bulletin Discusses Legislation

SEATTLE—John G. Wilson, manager of the Washington State Feed Assn., Inc., Seattle, pointed out in a recent bulletin that a revised Commission Merchants Act will be introduced at the coming session of the Washington Legislature, and that the first draft of the act required a $50-a-year license and a $5,000 bond for those who wholesale agricultural products.

"A retail dealer whose sales are all to the ultimate consumer is exempt, but if he does any wholesaling at all he is subject to the act," Mr. Wilson explained.

"At the moment it appears that the association may be able to amend the first draft as follows: 'Provided that any retailer may occasionally wholesale a commodity which is in surplus, however, such wholesaling shall not be in excess of 2% of such retailer's gross income'."

Mr. Wilson said that an explanatory sheet attached to the first draft, includes the following: "The term 'dealer' has also been expanded to include persons who may deliver to a producer to feed and care for, for a definite period, poultry or livestock." The association manager said that this is somewhat confusing and that the association has requested clarification as to the meaning of the operation described. "We do not know of any poultry operation that fits the description, integrated or not, although it may apply to livestock," he said.

AMINO ACID

(Continued from page 16)

determined in the first place. However, one must remember in using the NRC requirements for practical diets (soybean based) that the requirement for each amino acid is related to the requirements for all other amino acids rather than being required as an absolute percentage of the diet. For example, the NRC lysine requirement is 0.9% of the ration under the same conditions that the methionine requirement is 0.45%; that is, twice as much lysine is required as methionine. However, for a given high-energy, high-protein diet, the methionine requirement might be found to be 0.55%. In this case the lysine requirement will not be 0.99%, but can readily be shown to be about 1.1% of the ration.

3. Proportion of Dietary Energy Content to Protein Content as the Prime Determinant of the Amino Acid Requirement. Amino acid requirements expressed as percentage of dietary protein, are usually considered to decrease as dietary level of protein increases. Most workers achieved higher protein levels by replacing carbohydrate with protein. For most experiments published, high protein diets contained less energy than the low protein diets employed.

We have found that the amino acid requirement, as per cent of protein, is constant over a wide range of protein content provided that the proportion of Calories (PE/lb.) to protein is relatively constant. This holds true even though the birds grow at different rates due to differences in total nutrients; that is, 600 g. versus 425 g. at 4 weeks.

Since amino acid availability differs from protein to protein, it is difficult to transfer the numerical requirements observed for one set or combination of proteins to another set. However, within each set, the proportion of energy content to protein content appears to fix amino acid requirements for broilers.

4. Amino Acid Requirement as a Function of Growth Rate, Feed Conversion, or Egg Production. In evaluating whether or not a given requirement should be modified based on newly published work, one of the most exasperating oversights is the failure of authors to recognize that greater dietary nutrient concentrations should improve bird performance (growth, feed conversion, or egg production). Therefore, except for studies of metabolic interrelationships, papers proposing modifications of an amino acid requirement based on a bird weighing 200 g. at 5 weeks of age or of hens in 30 to 40% production, must be considered to be meaningless. It should be obvious that amino acid requirements are directly related to growth unless that growth is being restricted by other uncontrolled factors.

5. Metabolic Factors Affect Amino Acid Requirements. The metabolic interrelationship that exists in chickens between isoleucine, leucine and valine must always be kept in mind in studying the requirements of poultry for these amino acids. Similarly, one must always consider that, for example, methionine can be a precursor of cystine, that phenylalanine can be a precursor of tyrosine, and in general, that metabolic interconversions will obviously influence amino acid requirements.

6. Physiological Factors Affecting Amino Acid Requirements. While the importance of body size and hormone level is well recognized, the influence of dietary pre-treatment is often ignored completely; that is, the amino acid requirements of birds fed a specific diet can be radically altered depending on what the birds were fed before receiving the test diet. For example, the usual finishing ration is formulated to be relatively isocaloric with the starter, but of lower protein content. While this practice can be economically more favorable than feeding the starting ration throughout, it is not generally realized that this type of finishing ration slows down growth rate.

On the other hand, this identical finishing ration can be fed to birds which previously had received the same protein level, but 10% fewer calories. The result is that, when these caloric restricted birds are given the usual finisher, they accelerate their rate of growth. As one would expect, the amino acid requirements for birds with a decreasing growth rate are markedly different than for birds accelerating their rate of growth on the same ration. The bird in accelerated phase of growth will require a more critical balance, not only of amino acids, but of all other essential nutrients, such as vitamins and minerals.

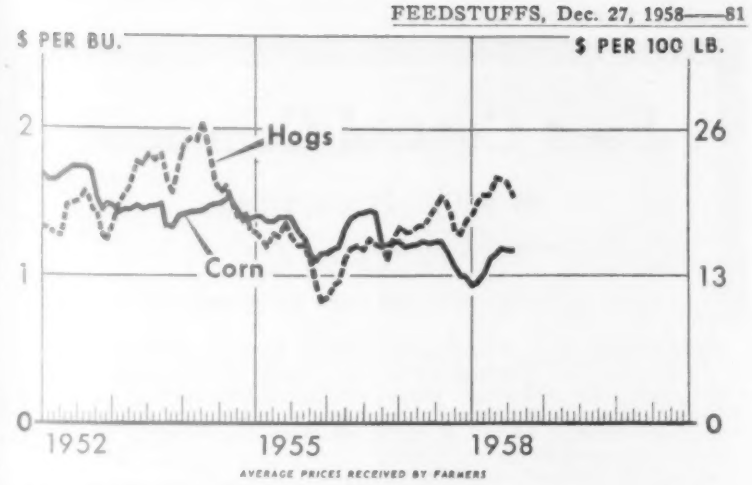
7. How to Change the Requirements: An Approach to Unsolved Problems. What kind of new information will justify alteration of present NRC amino acid requirements for poultry? In the opinion of the author, the "true" requirement can only be approximated as long as we must contend with data obtained by supplementing deficient proteins. Since these proteins not only contain different amounts of amino acids but also vary in availability of each amino acid for poultry, it will be difficult to relate requirements determined with a specific group of proteins to diets containing a different group of proteins until:

(a) better methods for the determination of the amino acid content of feedstuffs are at hand so that

(b) calculations of coefficients representing the percentage of an amino acid actually utilized by the bird for a given feedstuff can be made, and finally so that

(c) calculation of a regression equation based on all nutrient interrelationships can be made to predict weight, feed conversion, and egg production.

One generally finds that reports alleging that the requirement for a given amino acid ought to be changed fail to consider some of the factors considered here; that is, the "new" information is useful only for the specific diets employed. A good example of this would be to infer that synthetic diets containing no protein and only crystalline amino acids actually represent the true amino acid requirement. The interesting point about such diets is that the experimentalists got the birds to grow or lay eggs at all, and not that the (sub-optimal) performance obtained should lead one to alter presently accepted amino acid requirements. Finally, the use of Almquist's method (Poultry Science, 1952, 21:966) to predict requirements for a specific diet ought to be more generally applied with the proviso that knowing a specific requirement is only half of what one needs to know. The other half is how the bird's requirement for a specific amino acid for a specific diet will be altered when other dietary constituents are altered.



HOG-CORN PRICE RELATIONSHIP—Hog prices in 1958 were much above prices of corn. Prices of meat and meat animals advanced in 1958 as livestock slaughter and meat output fell from previous highs. It is believed that in 1959 prices of hogs will decline substantially as output expands. If the 1959 spring pig crop should be over-expanded, the price drop next fall could be severe.

Oregon Co-op Promotes Paul Vandenberg

HILLSBORO, ORE.—The appointment of Paul Vandenberg as manager in charge of feed merchandising and feed formulations for Tualatin Valley Cooperative has been announced by Rudy Smith, general manager.

Mr. Vandenberg, who has been with the co-op for the past six years, had held similar positions in Oregon, Iowa and Minnesota.

The newly created office, according to Mr. Smith, is a part of a recently announced feed expansion program. Ed Rice has been placed in charge of the grain division and ingredient quality control. He held a similar position with Hodgen-Brewster, Centennial Mills, Inc., Portland, Ore.

Mr. Smith said the new appointments have been made to further the co-op's program of expanding sales to area retailers, wholesalers and cooperatives who have no facilities of their own.

New Plant Completed By Mixer Company

GREEN ISLE, MINN.—The Green Isle Manufacturing Co., producer of portable farm mixers, has completed construction of a 60 ft. by 166 ft. plant.

According to the company, the new plant will give the company approximately twice its former production area.

The concrete block constructed building houses a paint booth complete with the latest equipment, said Milton Engelmann, president.

The number of employees has been increased by nearly 50%, he added.

IT'S ECONOMY WISE TO JERSEEIZE WITH JERSEE
VITAL-MIN a Pre-Mix
VITAMINS MINERALS
Made by the builders of VITAMINIZED and MINERALIZED CONCENTRATES since 1912.
Jobbers and Warehouses From Coast to Coast
THE JERSEE CO. MINNEAPOLIS MINN.
WRITE TODAY FOR DEALERS SALES HELPS!

SPECIFY
Columbia Calcium
COLUMBIA QUARRY CO.
1007 Washington Ave.
ST. LOUIS 1, MO.

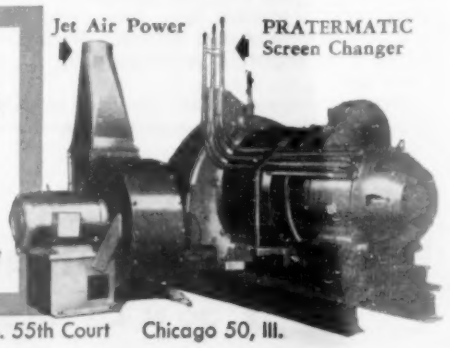
In Canada it's . . .
N. D. HOGG, LTD.
Feed Ingredient Merchants
P. O. Box 66, Station C
TORONTO, ONT., CANADA

DON'T BUY WATER!
Dehydration assures uniform low moisture content of PAXCO DEHYDRATED CORN COB MEAL, in all grinds, from coarse to fine. Assures against spoilage, provides uniform absorption characteristics, saves in cost of product and shipping. Write today for information.
PAXTON PROCESSING CO., INC.
P. O. Box 120 Paxton, Illinois Phone 222

Bulk Scale
Save on handling costs with Burrows Model 1200 Scale. Built-in Fairbanks Morse scale weighs down to the ounce. Rugged, practical. Rubber wheels and roller bearing casters. Capacity 1,000 lbs. Order yours by collect wire today.

Only $295
BURROWS
Burrows Equipment Co.
1316-C Sherman Ave., Evanston, Ill.

Your Feed Requirements
C. J. MARTENIS GRAIN CO.
44 Whitehall Street
NEW YORK 4, N.Y.
Phone:
Bowling Green 9-4447
Bran and Middlings
Dried Brewers' Grains
Citrus Pulp
Cottonseed Meal
Distillers' Grain
Old Process Oil Meal
Soybean Meal
Beet Pulp

FOR 1958 and EVERY YEAR MAKE IT
BLUE STREAK Prater
Jet Air Power
PRATERMATIC Screen Changer

Prater Pulverizer Co. 1537 So. 55th Court Chicago 50, Ill.

Feed Control Comment

By BRUCE POUNDSTONE

Secretary, Association of American Feed Control Officials

Kentucky Agricultural Experiment Station, Lexington

EDITOR'S NOTE: This department, "Feed Control Comment," is a new feature which will appear regularly in Feedstuffs. The author, Bruce Poundstone, is head of the department of feed and fertilizer at the Kentucky Agricultural Experiment Station, Lexington, and is secretary of the Association of American Feed Control Officials. He previously was secretary of the Association of Southern Feed and Fertilizer Control Officials. Mr. Poundstone will discuss various aspects of feed control which are of importance and interest to feed firms. It is expected that the department will be appearing every two weeks in Feedstuffs.

New Labeling Should Be Reviewed in Advance

Companies are constantly faced with coining new terms and adding new expressions to labels. Much difficulty will be avoided if a manufacturer will consult the control officials directly involved before embarking on a campaign for printing labels carrying the new expression.

One of the best ways to do this is to write to one of the investigators listed in the annual publication of the Association of American Feed Control Officials or to a committee such as the Pet Food Committee if it is a matter pertaining to pet food labeling, or the chairman of the Drug Committee if it is a matter pertaining to drugs. If it is not clear who should be consulted, a letter to the secretary will indicate how to proceed.

Recent examples that have come to the attention of control officials illustrate the necessity of doing this in advance. A pet food manufacturer modified his product in such a way as to increase the protein. He brought out a label which indicated this in bold type as "Protein Increased 50%." This was modified to "Now 15% Protein."

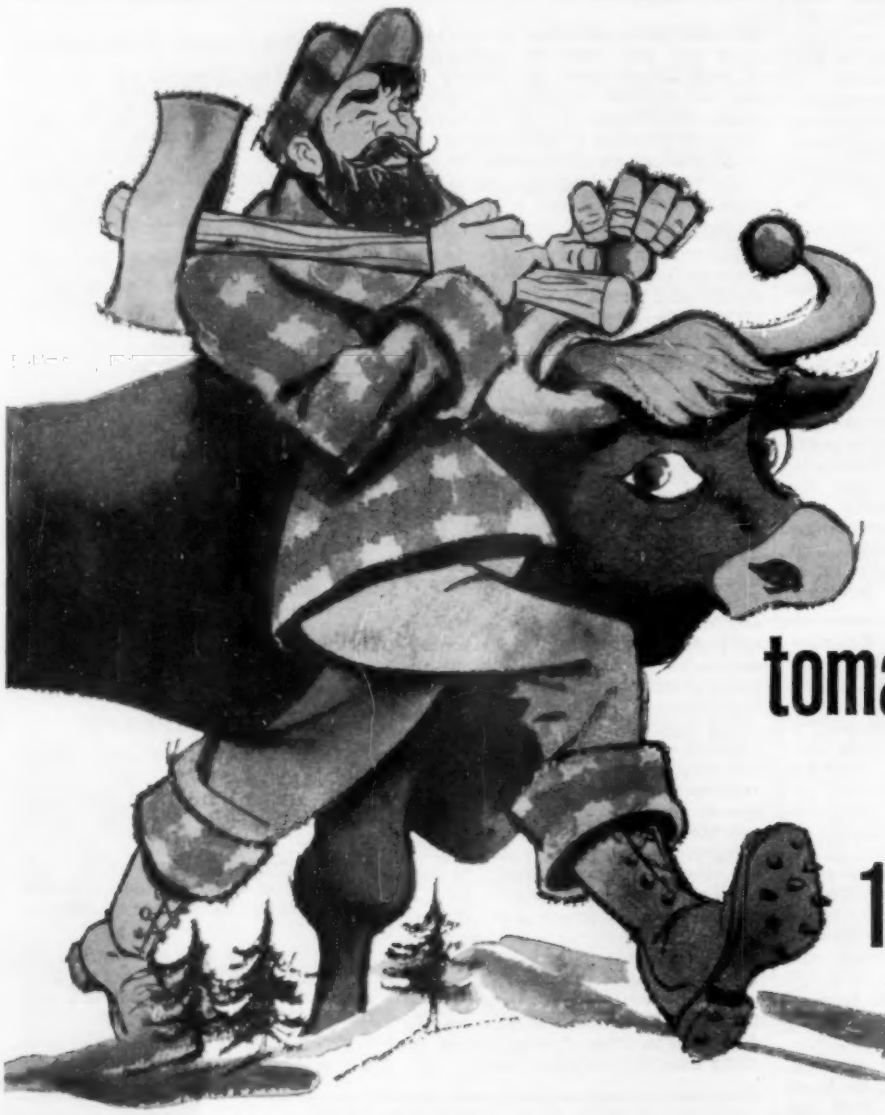
In another instance a company was giving special treatment to a standard ingredient by heating under pressure and with steam. This was indicated on the tag as "toasted." This is presently under review. The term "cooked" would be more proper.

The point here is not so much to discuss the merits or demerits of a statement such as "protein increased 50%" or "toasted," but rather to illustrate the importance of clearing names and expressions — in fact, clearing all features of a label and labeling before proceeding with printing and any plans for sale based upon such wording.

Such changes should be anticipated far enough in advance as will allow a thorough review by the appropriate control officials or agencies of the Association of American Feed Control Officials so that acceptance is assured.

Wallace M. Boutott

SERVICE DIRECTOR—Wallace M. (Wally) Boutott has been appointed dairy service director of Geerlings' Feed Mills, Inc., Waterloo, Iowa. His new duties will be devoted mainly to working with the company sales and dealer organization on dairy nutrition and service problems, according to C. W. Lewis, sales manager of the firm. Mr. Boutott was formerly employed by Foxbilt, Inc., for five years as dairy service director and dealer training program lecturer. He spent seven years with the Equity Cooperative Livestock Sales Corp. in Wisconsin, and was also secretary-treasurer and field director of the Interstate Holstein-Guernsey Assn.



143 ax handles, 17-10c tomato cans, and 1 tobacco box

This odd assortment of material made up the first "official" horn-tip to horn-tip measurement of Paul Bunyan's famous blue ox, Babe. Unfortunately, Babe's later growth could never be recorded because he "growed" two feet more each time you looked at him. No doubt about it . . . Paul Bunyan knew his onions when it came to productive livestock feeding.

Even though your feed can't turn out such fabulous creatures as this, it can produce far better real-life results for you and for your customers. Modern mills throughout the country have been achieving an entirely new concept of high-efficiency feeds through the addition of an important new ingredient . . . stabilized animal fat.

Animal fat increases feed efficiency more than any other single ingredient because it contains twice as much energy per pound. Its use makes possible new high-powered feeds for poultry, hogs, or cattle . . . high-efficiency feeds that mean better conversion, lower cost per pound of weight gain, and increased growth rate. In addition, animal fat adds better appearance and palatability, reduces dustiness in feed, and increases capacity of pellet mills.

You'll get better prices and more sales with your fat-fortified feeds because they do more for the user . . . give him greater profits through better results.

No matter if you're large or small, you can use animal fat easily and profitably to improve your product. Write for our free booklet that fully describes the application of fat to feed. You owe it to yourself to have this valuable information.

nra national renderers association

30 N. LASALLE ST. FRanklin 2-3289 CHICAGO 2, ILL.

Marion MIXERS

ELIMINATE GUESSWORK IN MOLASSES MIXING!

Complete accuracy in Molasses mixing bag after bag!
One mixer For All Your Mixing Needs.
Mixes Both Dry and Molasses Feed.
SEND FOR FREE LITERATURE:
RAPIDS MACHINERY CO.
827 11th Street Marion, Iowa

Use Your Own Salt and Calcium with Herman Nagel's Formula B

...to Supply Every Needed Mineral

In a form so soluble "it melts on your tongue."

The HERMAN NAGEL Co.
53 W. Jackson Blvd.
Chicago 4, Illinois

SURVEY REVEALS PLANS AND HOPES

(Continued from page 1)

deal of solid thinking about problems and opportunities to be encountered in the year ahead.

On the basis of these statements, the following general observations appear to stand out:

● **Most manufacturers will be trying to upgrade sales personnel and dealer ability in 1959 so that better service can be provided customers.**

● **More contract operations "where they fit" and more company-owned feeding operations will be getting the attention of feed executives.**

● **Farm specialization and integration and contract farming will continue to grow, manufacturers feel. Most indicate they will adapt to trends as they see best for their own operations, and many see increased tonnage opportunities.**

● **While the expected increases in livestock and poultry numbers will account for bigger feed volume, some manufacturers expect a tapering off in feed demand in the latter part of 1959 because of narrower feeding margins.**

● **Losses in the broiler business will continue unless there is sharp curtailment of placements.**

● **Lower livestock and poultry prices are seen as one of the major problems in improving volume in 1959. Problems in connection with credit and financing continue to get a lot of emphasis. Meanwhile, still more financing of larger feeders is expected.**

● **There will continue to be a trend toward smaller mills closer to feeders.**

● **Virtually all companies expect their bulk feed volume to increase in 1959. Bulk tonnages among reporting firms in 1958 ranged from virtually none to 97%, with an average of about 25% among all companies.**

● **There will be a continuing increase in complete (in many cases pelleted) feeds for livestock as well as poultry, most of the feed men say. A few of the firms are now making complete pelleted rations, including roughage, for ruminants.**

● **Dealers will be eliminated unless they provide services justifying their margins, several manufacturers said. However, many see real opportunities for dealers and local mixers if they serve larger areas, render better service, offer feed in bulk and, in some cases, provide grinding, mixing and pelleting. Working capital and credit are major problems.**

1958 a Big Year

An indication of the healthy spurt the industry made in its growth pattern is revealed by the fact that twelve manufacturers participating in the survey reported increases of 20% or more in 1958. One southwestern concern managed to show a 42% boost in volume.

Two among the group reported no change in tonnage from 1957 to 1958, and only one indicated a drop in volume (a severe one).

Peering into the future, five manufacturers expect their business volume will be about the same as in 1958, and two of them look for a decrease. All of the remainder expect increases, although only five look for percentage increases matching their 1958 increase or surpassing it.

Typically, several manufacturers reporting increases in 1958 of 20% or more are predicting increases of 10 or 15% for 1959. One manufacturer located in the Southwest who reported a 1958 increase of 20%, however, looks for a gain of 35% in 1959. Another, operating several western plants, looks for a 20% gain next year on top of a 16% increase in 1958. Others looking forward to "beating the percentage" increase next year have more modest hopes.

Several manufacturers, in responding to the question concerning their profit outlook, made reference to a possible "squeeze" on margins, and others indicated the possibility of credit losses.

Here are some of the comments:

Profit margins will be squeezed—probably about the same (?).

Smaller margin per ton. Greater profit.

We hope higher, but budget lower.

Higher, not considering credit losses.

Approximately the same (I hope).

Total higher. Percentagewise less.

Lower percentage. Union involvement.

About same or lower on account of probable loss in financing plans.

The slight increase in tonnage expected for 1959 should automatically improve the profits. However, the profits might not directly go up in comparison to the expected increased tonnage because of increased costs and possible lower margins because of competitive conditions.

We expect profits to be about the same in 1959 as 1958, unless the broiler market fails to advance any from present levels, and if this should be the case, we would anticipate lower profits.

Hope they will be as good. Too much depends on markets to estimate.

We expect slightly higher profits in 1959, brought about through increased volume and efficiency.

Typical Companies

No attempt was made in analyzing these survey results to weigh the predictions to production capacity represented by the various respondents. They vary from companies having national and regional distribution to strictly local concerns and include both private firms and cooperatives.

The conclusions and averages obtained, therefore, cannot be claimed to represent a statistically accurate sampling, although the results can be said to reflect the experiences and expectations of representative manufacturing concerns.

Represented in the tabulations are nine companies in the Northwest, twelve in the Southwest and West, seven in the central states, four in the Southeast and three in the Northeast.

Here are the additional questions asked and replies of typical feed manufacturers:

Please make any general comments you care to on the outlook for next year.

In addition to the more specific comments below, some of the manufacturers made some general comments. Most look for a good volume, but several point out financing, overproduction, margin and other problems. Some look for more consolidations.

Here are some comments:

Southern firm: "Unless we have a more sound policy on credit from feed mills, the poultry end of feed manufacturing is in for some tough times."

Southwestern mill: "It will be survival of the fittest."

Midwest firm: "Just bigger and tougher."

Southwestern firm: "Will see an increase in mills closed and consolidations or mergers."

South central company: "Cannot see profitable year in poultry feeding unless sizable cutback made."

Midwest firm: "Very good generally. Expect to continue gains made in 1958."

Midwestern firm: "Merger and absorption pattern of last few months will continue. Larger, well financed companies will develop."

Midwestern firm: "Outlook for volume is good, but margins will be seriously curtailed."

Southeastern plant: "Poor."

Eastern and southern firm: "More emphasis on diversity of operations, with less emphasis on broilers and turkeys on contract."

Eastern and southern firm: "Production of meat and eggs by feed manufacturers, processors and hatcheries, or combinations of these, will not be as sensitive to supply and demand as was production by individual farmers. It may take some severe adjustments to correct this situation. In the meantime, the consumer will benefit."

West Coast manufacturer: "1959 very promising."

Western firm: "Industry must improve its efficiency and service, help producer develop more markets and help improve efficiency from producer to housewife."

West Coast firm: "If industry does not work together to curtail overproduction of layers, broilers and turkeys, all will suffer along with customers."

What methods of developing increased sales will you stress in 1959?

Upgrading of service, and personnel to provide it, are prominent in the plans of manufacturers for next year. A number of manufacturers stress the need for improving the ability of salesmen and dealers and report efforts to recruit more and better dealers. Some companies plan to put greater emphasis on contract-type programs and company-owned projects, with "ability to finance" listed as a requisite to getting larger volume in some cases. More research and on-the-farm selling will be getting emphasis.

Here are some of the replies:

Multiple-unit firm: "Greater service to feeders."

Midwestern firm: "More direct work with dealers."

Midwestern firm: "Increased feeding efficiency."

Midwestern firm: "Research, service, dealer and employee training."

Southwestern firm: "New dealer solicitation, finance and integration programs, resale work."

Southwestern firm: "Personal contact."

Southwestern firm: "Possibly more company-owned projects."

Midwestern firm: "Sales of feed might be increased through further promotion of bulk feed sales. Also, the use of more contracts will be stressed for larger feeding operations. Entering in various forms of vertical integration must be considered and will be used where practical to help improve feed sales. These three mediums plus increased promotions and advertising are all considered a part of the next year's program to increase sales."

Multiple-unit firm: "Dealer growth programs."

Multiple-unit firm: "Hard selling."

Midwestern firm: "More turkeys and layers under contract, broilers about the same—all direct."

Midwestern firm: "More farm calls. More new dealers. More advertising and sales promotion."

Southeastern firm: "More complete programs, additional sales representatives and better quality feeds."

Northeastern firm: "We plan to emphasize an improved swine-feeding program."

Northeastern firm: "New pellet program."

Western firm: "Future business will depend upon ability to finance operations."

Southwestern firm: "Mostly company - owned outlets and company - owned poultry and turkeys—not a sales problem, more a service and management problem."

Midwestern firm: "Systems—service."

Western firm: "Our general phil-

(Turn to SURVEY, page 87)

Dr. J. R. Couch

CONVENTION MODERATOR — A "Research Round-Table" the evening of Jan. 29 will be one of the highlights of the American Dehydrators Assn. 17th annual convention to be held Jan. 28-30 in the Shamrock- Hilton Hotel, Houston, Texas. Dr. J. R. Couch, Texas A&M College, will be moderator. Among the college and industry nutritionists who will participate are Dr. W. M. Beeson, Purdue University; Dr. H. Ernest Bechtel, General Mills, Inc., Indianola, Iowa; Dr. L. E. Hanson, University of Minnesota; Dr. U. S. Garrigus, University of Illinois; Dr. H. R. Bird, University of Wisconsin; Dr. Francis H. Bird, Eastern States Farmers Exchange, Inc., West Springfield, Mass.; Dr. W. W. Cravens, McMillen Feed Mills, Decatur, Ind.; Dr. H. O. Kunkel, Texas A&M College; Dr. C. F. Huffman, Michigan State University; Dr. W. N. McMillen, A. E. Staley Manufacturing Co., Decatur, Ill.; Dr. Roland Bethke, Ralston Purina Co., St. Louis, and H. R. Halloran, Halloran Research Farm, Modesto, Cal. A question and answer session will follow brief presentations by several of the nutritionists.

Growing Bulk Demand Reported in Southeast

ATLANTA, GA. — Increased demand for bulk feeds in the Southeast was indicated recently in a report on production of the two new feed mills completed during 1957-58 by Cotton Producers Assn., Atlanta.

The mills, known as Cooperative Mills, are located in Flowery Branch, Ga., and Guntersville, Ala.

J. Julian Baker, director of distribution for the cooperative, said that during the 1957-58 year approximately 47% of the tonnage from both mills was handled as bulk feed. "And this is increasing every day," he reported to 2,000 delegates attending the recent annual meeting of the association.

Mr. Baker also reported that the two mills "have far exceeded our most optimistic expectations, and are now running at a rate of 50% above the original intention."

Reporting a 44% increase in feed tonnage and a 36% boost in dollar volume over the previous year, Mr. Baker told delegates that the feed department, which was started in 1943, is the "teenager" of the association.

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

A AND D FEEDING OIL

Denver: Demand fair; trend steady; supply good; 2,250 A, 300 D 22¢ lb., Denver.

Chicago: Demand fair; supply adequate; straight A feeding oil, with 10,000 units vitamin A per gram 7@8¢ a million units of vitamin A, l.c.l., packed in 55 gal. drums, f.o.b. Chicago, drums included.

New York: Demand fair; trend steady; supply limited; price per lb. in 55 gal. drums (413 to 420 lb.): 300 ICU, 750 A 13½@15½¢, 1,500 A 15½@17¢, 2,250 A 17½@20¢, 3,000 A 19½@21¢; 600 ICU, 1,500 A 16@18¢, 2,250 A 18@19½¢; f.o.b. Massachusetts, New York or Pennsylvania.

Boston: Demand light; supply good; 600 D, 1,500 A 17½¢ lb.; 300 D, 2,250 A 18¢; 300 D, 1,500 A 16½¢; 300 D, 750 A 14½¢; 400 D, 3,000 A 20¢; 300 D, 3,000 A 19½¢; 75 D, 750 A 14½¢.

Minneapolis: 10,000 A 35¢ lb.; 300 D, 2,250 A 21½¢ lb.; 300 D, 1,500 A 20½¢ lb.; 300 D, 75 A 18½¢ lb.

ALALFA MEAL

Ft. Worth: Demand good; supply sufficient; 17% protein dehydrated $60, Ft. Worth area, truck; Kansas dehydrated, 17%, 100,000 A $62.80, rail; suncured 13%, No. 1 ¾-in. grind $39, truck or rail, immediate.

Portland: Demand good; supply ample; trend unchanged to lower; supply ample; suncured, 15% $41; dehydrated $65.

New Orleans: Demand good; supply ample; trend steady; 17% $65@66; pellets $59@61.

Memphis: Demand fair; trend steady; supply scarce; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $63.

Omaha: Demand fair; supply plentiful; 17% dehydrated, 100,000 A units, bulk pellets $50; sacked meal $55, Omaha basis.

Philadelphia: Demand and supply fair; trend unsettled; 17% dehydrated $69.

Los Angeles: Demand fair; trend unchanged; supply adequate; dehydrated meal, 17% protein, 100,000 A $49; dehydrated pellet meal, 17% protein, 100,000 A $52; suncured crumbles, 15% protein $43@44; suncured meal $41@42.

Denver: Demand good; supply ample; trend firm; dehydrated $48.

Chicago: Demand fair; supply adequate; 17% dehydrated, with 100,000 units vitamin A guaranteed $60@60.50; 13% No. 1 fine ground $48@49.

Kansas City: Demand good; trend strong; supply adequate, but tightness expected before end of season; dehydrated alfalfa with 17% protein and 100,000 units vitamin A guaranteed on arrival; reground pellets $54, sacked; oiled meal $56, sacked; pellets $49, bulk; 15% protein and 125,000 units A meal $58, sacked; non-guaranteed A meal $47@48, sacked, with very little available; suncured meal market is unchanged, demand is fairly good but off a little from recently, supplies are adequate, No. 1 fine ground $33@33.50, No. 1 ¼-in. $31.50, No. 2 ¾-in. $29.50, sacked.

Cincinnati: Demand fair; trend higher; supply adequate; 17% dehydrated, 100,000 vitamin A $66.

Boston: Demand active; supply good; dehydrated, 17% $56; suncured, 13% $48, nominal.

Minneapolis: Very good demand; ample supplies; prices tronger with other ingredients; reground pellets, 17%, 100,000 units A $55.50, bulk; oiled reground $57.50, bulk.

St. Louis: Demand slow; trend steady; supply ample; 13% fine suncured $39.50; 17% dehydrated, 100,000 A $56.

Seattle: Demand fair; trend firm; supply good; 15% protein suncured $44, truck loads; 136,000 A unit dehydrated $69, truck loads.

Buffalo: Demand and supply fair; trend steady to higher; $66.50, Boston.

ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand light; supply sufficient; prime tallow, tank cars 7½¢ lb.; drums 9¢ lb., f.o.b. north Texas packing plants with returnable drums.

New Orleans: Demand fair; trend steady; supply adequate; 7½@8¢ lb., tank cars.

Atlanta: Demand normal; trend steady; supply barely ample; 7¼¢ lb., delivered.

Chicago: Demand and supply fair; bleachable fancy tallow, tank truck or carlots 7¼@7¾¢ lb.; yellow grease 7@7¼¢ lb.

San Francisco: Demand fair; supply ample; bleachable fancy 8¢ lb.; yellow grease 7½¢ lb.

Louisville: Demand slow; trend steady; supply normal; bleachable fancy 7¾¢ lb.; white tallow 8¢ lb.; yellow grease 6¾¢ lb.

Boston: Demand and supply steady; $152.50, f.o.b. shipping point.

BARLEY FEED

Portland: Demand good; trend firm; supply ample; rolled $64, ground $62.

New Orleans: Demand slow; trend unchanged; supply light; $60@61.

Philadelphia: Demand slow; supply fair; pulverized $48.

Los Angeles: Demand fair; trend unchanged; supply adequate; standard rolled $3.28 cwt., sacked; standard ground $3.28 cwt., sacked.

Chicago: Demand excellent; supply tight; $39.

Baltimore: Demand excellent; supply tight; $49.50.

San Francisco: Demand fair; supply ample; rolled $63.50, ground $62.50.

Boston: Demand fair; supply adequate; $45.

Milwaukee: Demand good; supply fair; needles $1.05@1.15 cwt.; ground screenings $25.

Seattle: Demand and supply fair; trend steady; $53, bulk, truck lots.

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

Ogden: Supply average; rolled $51@56; whole barley $43@45.

BENTONITE (SODIUM)

Denver: Demand fair; trend good; supply ample; $21.

Cincinnati: Demand steady; supply adequate; f.o.b. Cincinnati, minimum 30-ton carlots: $9 granular $31.50; 200 mesh fine $31.

Chicago: Demand steady; supply adequate; f.o.b. Wyoming and South Dakota shipping points; granular 30 mesh $16.50; fine granular, 50 to 100 mesh $13.75; powder, 200 mesh $13.50, f.o.b. Belle Fourche, S.D., minimum 30-ton carlots; 30 granular $13.50 net; 200 mesh fine $13.25 net.

BLOOD FLOUR

Louisville: Demand slow; trend steady; supply ample; $95@100.

BLOOD MEAL

Portland: Demand slow; supply ample; trend unchanged; $105.

New Orleans: Demand fair; trend unchanged; supply light; $110@115.

Los Angeles: Demand slight; supply adequate; trend steady; $7.50 a unit of ammonia.

Chicago: Demand and supply fair; $130 @145, guaranteed 80% protein.

San Francisco: Demand good; supply tight; $7 a unit of ammonia.

Louisville: Demand slow; trend steady; supply ample; $95@100.

Ogden: Supply normal; $110 in 100-lb. bags, f.o.b. Ogden.

BONE MEAL (STEAMED)

Ft. Worth: Demand fair; supply light; $55, f.o.b. Ft. Worth, local manufacture.

Portland: Demand slow; supply ample; trend unchanged; $95.

New Orleans: Demand slow; supply normal; trend steady; $85@90.

Atlanta: Very little supply and demand; trend steady; $65, f.o.b. New Orleans, January arrival.

Denver: Demand good; trend strong; supply tight; $77.50, Bay Shore, Cal.

Los Angeles: Demand fair; trend steady; supply adequate; imported $73.50 in 20-ton lots.

Chicago: Demand good; supply fair; $85 @95.

San Francisco: Demand good; supply ample; $75.

Cincinnati: Demand good; trend strong; supply fair; $110.

Louisville: Demand slow; trend steady; supply light; $90@95.

Boston: Demand and supply steady; $90.

Seattle: Demand steady; trend firm; supply good; $87, ex-dock, truck lots.

Buffalo: Demand good; trend steady; supply ample; $90.

BREWERS DRIED GRAINS

Ft. Worth: Demand slow; supply moderate; $56.90, December, delivered Ft. Worth.

New Orleans: Demand fair; trend steady; supply normal; $54.50@55.50.

Philadelphia: Slow demand; light receipts; $65.

Los Angeles: Demand and trend steady; supply adequate; $49.50 bulk, $53.50 sacked.

Chicago: Demand fair; supply tight; 26% $52@52.50.

San Francisco: Demand fair; supply ample; $54.

Cincinnati: Demand poor; trend higher; supply adequate; $60.

Louisville: Demand fair; trend steady; supply ample; $52.

Boston: Demand active; supply short; 26% $64, 22% $56.50@57.

Milwaukee: Demand good; supply fair; $53.50.

St. Louis: Demand good; trend higher; supply short; $50.

Buffalo: Demand and supply fair; trend steady to higher; $53.50, bulk, Boston.

BREWERS DRIED YEAST

Portland: Demand steady; supply ample; trend unchanged; 8½¢ lb.

Denver: Demand light; trend steady; supply ample; 9¢ lb., f.o.b. Golden, Colo.

Omaha: 10½¢ lb.

Los Angeles: Demand steady; trend unchanged; supply adequate; 10¢ lb. in 5-ton lots; 11¢ lb. in 1-ton lots; 12¢ lb. in less than 1-ton lots.

Chicago: Demand good; supply limited; 10@11½¢ lb. in carlots; 10¾@12½¢ lb., l.c.l.

San Francisco: Demand fair; supply good; 10¢ lb.

Cincinnati: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

Louisville: Demand slow; trend steady; supply normal; 10@10½¢ lb.

Boston: Demand and supply steady; 10¢ lb.

Seattle: Demand slow; trend steady; supply ample; $12 cwt.

Buffalo: Demand fair; trend steady; supply ample; $10.65 cwt.

St. Louis: Demand good; supply limited; 10¢ lb. in carlots; 11¢ lb. in ton lots; 12¢ lb. in less than ton lots.

Milwaukee: Demand good; supply limited; 10½@11½¢ lb. in carlots; 10¾@12½¢ lb., l.c.l.

Pittsburgh: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New Orleans: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New York: Carlots 9½¢ lb.; 10-ton lots 10¢ lb.; 5-ton lots 10½¢ lb.; ton lots 11¢ lb., f.o.b. New Jersey.

BUTTERMILK-CONDENSED

Wichita: Demand slow; supply sufficient; $2.90 cwt. in barrels.

New Orleans: Demand slow; supply normal; trend steady; $4.25@4.30 cwt.

Philadelphia: Slow demand; light receipts; $4.25 cwt.

Chicago: Demand light; supply adequate; $3.25@3.50 cwt. in carlots.

San Francisco: Demand fair; supply good; $5 cwt.

Louisville: Demand very slow; trend steady; supply nil; $4.25 cwt.

Boston: Demand slow; supply light; 3½¢ lb.

Los Angeles: Demand fair; trend unchanged; supply adequate; 5½¢ lb. in 100-lb. lots; 4½¢ lb. in 500-lb. lots.

Ogden: Supply average; $4.40, 100-lb. drum.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight and tax)

New York: Crystals $15.28, flour $10.28.
Buffalo: Crystals $16.11, flour $11.11.
Toledo: Crystals $17.96, flour $12.96.
Boston: Crystals $16.53, flour $11.63.
Limecrest, N.J.: Crystals $10.50, flour $5.50.

CALCIUM CARBONATE

Los Angeles: Demand slow; trend unchanged; supply ample; $10.25.

Chicago: Demand steady; supply adequate; fine grind, plain $9.54, 100-lb. bags; bulk, in hopper cars, fine grind $7.54; bulk in boxcars $8.04; granular grind $1 premium.

Cincinnati: Demand fair; trend steady; supply adequate; $8@9 cwt.

Minneapolis: Fine grind, 50-lb. bag $12.25, 100-lb. bag $11.50; bulk, boxcar $10; bulk, hopper $9.50; coarse grind $1 premium, delivered Minneapolis.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, truck lots.

CHARCOAL

Los Angeles: Demand steady; trend unchanged; supply ample; hardwood poultry $156 in less than ton lots; $144.40 in ton lots.

Chicago: Demand quiet; supply adequate; poultry charcoal $110 in 50-lb multiwalls.

San Francisco: Demand steady; supply ample; $141.

Boston: Demand and supply light; $100.

COCONUT OIL MEAL

Portland: Demand slow; supply ample; trend unchanged; $84.

Los Angeles: Demand fair; trend unchanged; supply limited; copra cake $85 @87.

San Francisco: Demand good; supply tight; solvent $82.50; expeller $89.50.

Seattle: Demand fair; trend strong; none available; $90, ex-dock, Seattle (Philippine production).

COD LIVER OIL (FORTIFIED)

Boston: Demand fair; supply good; 600 D, 2,250 A 19¢ lb.; 300 D, 3,000 A 20½¢ lb.; 300 D, 2,250 A 18½¢ lb.; 600 D, 1,500 A 18¢ lb.; 300 D, 1,500 A 17¢ lb.

New York: Demand limited; trend steady; supply fair; price per lb. in 55 gal. drums (413 to 420 lb.): 300 ICU, 750 A 14½@15½¢, 1,500 A 18½@20¢, 2,250 A 18½@21¢, 3,000 A 21½@23¢; 600 ICU, 1,500 A 17½@19½¢, 2,250 A 20@22¢, 3,000 A 22@23¢; f.o.b. Massachusetts, New York or Pennsylvania.

CONDENSED FISH SOLUBLES

New Orleans: Demand light; supply limited; trend steady; 50% solid $95@98, f.o.b. Gulf.

Denver: Demand fair; trend steady; supply ample; dried $187.40.

Boston: Demand active; supply scarce; 5¢ lb., nominal.

New York: Demand fair; trend steady; supply good; 5¢ lb., f.o.b. eastern shore.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis, bulk basis $5 less)

Minneapolis: Feed $57.80, meal $89.80.
Atlanta: Feed $63.98, meal $95.98.
Birmingham: Feed $62.64, meal $94.64.
Boston: Feed $62.84, meal $94.84.
Chicago: Feed $51, meal $83.
Cleveland: Feed $59.14, meal $91.14.
Denver: Feed $61.51, meal $93.51.
Ft. Worth: Feed $59.96, meal $91.96.
Indianapolis: Feed $56.36, meal $88.36.
Kansas City: Feed $51, meal $83.
Louisville: Feed $58.21, meal $90.21.
New Orleans: Feed $61.20, meal $93.20.
New York: Feed $62.43, meal $94.43.
Norfolk: Feed $61.71, meal $93.71.
Philadelphia: Feed $62.02, meal $94.02.
Pittsburgh: Feed $59.96, meal $91.96.
St. Louis: Feed $51, meal $83.

CORN OIL MEAL

Cincinnati: Demand fair; trend higher; supply adequate; $59.

Louisville: Demand slow; trend strong; supply ample; $61.45.

COTTONSEED OIL MEAL

New Orleans: Demand fair; trend steady; supply average; $75.50@76.

Wichita: Demand good; supply sufficient; 41% old process $76.

Ft. Worth: Demand excellent for meal, slow for hulls; limited offerings; carlots, 41% old process $72, prompt; pellets $2 additional; cottonseed hulls $16.

Portland: Demand moderate; trend higher; supply limited; $72.

Memphis: Demand good; trend higher; supply scarce; prime 41% protein, old process $71, sacked; new process, 41% solvent $70, sacked.

Omaha: Demand good; supply very tight; 41% solvent $82, bulk, delivered Omaha.

Atlanta: Demand good; trend strong; supply very limited; 41% $73, sacked, December-January.

Philadelphia: Demand slow; trend unsettled; supply light; $83.50.

Los Angeles: Demand good; trend stronger; supply light; $65.

Chicago: Demand good; supply tight; hydraulic $70, solvent $69, basis Memphis.

Kansas City: Demand good, especially in southern areas; trend firm; supply very tight with no December meal offered; old process meal $71@71.50, sacked, Memphis; solvent meal $70.50.

San Francisco: Demand good; supply tight; 41% solvent $69.70; 44% solvent $72.70.

Cincinnati: Demand poor; trend higher; supply fair; $78.

Louisville: Demand slow; trend strong; supply ample; old process $76.50; new process $75.50.

Boston: Demand good; supply fair; $86.

Seattle: Demand good; trend strong; supply limited; $82, truck lots, 41% expeller process.

St. Louis: Demand fair; trend higher; supply limited; solvent $77.

Ogden: Supply average; 41% $66@71.

Buffalo: Demand and supply fair; trend steady to higher; $86, Boston.

CURACAO PHOSPHATE

New York: Trend steady; ground Curacao phosphate in 100-lb. bags $48, f.o.b. cars or trucks, New Orleans, Jacksonville, Fla., or Philadelphia.

D ACTIVATED PLANT STEROL, POWDERED

Chicago: Demand good; supply adequate; 4,000,000 U.S.P. units per lb.; 15¢ lb. in ton lots; less than ton lots 17¢ lb.; 12,000,000 units per lb., 5 tons to a carload 23¢ lb., ton lots and less 30¢ lb.

D ACTIVATED ANIMAL STEROL, POWDERED

Cincinnati: Demand fair; trend steady; supply ample; 1,500 ICU 11@12¢ lb.; 3,000 ICU 18¢ lb., warehouse.

New York: Demand and supply good; trend steady; price per lb. in 50- and 100-lb. bags or 100-lb. drums: 1,500 ICU 8@12¢ bagged, 12@13¢ drums; 3,000 ICU 13@17¢ bagged, 17@18¢ drums; f.o.b. or delivered basis Pennsylvania, Delaware or New York.

DEFLUORINATED PHOSPHATE

Tupelo, Miss.: Minimum phosphorus 13%, minimum calcium 31%, maximum fluorine .12%, $51 net ton, f.o.b. Tupelo in 100-lb. multiwall bags, $48 in bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum calcium 36%, maximum fluorine .18% $69.12 net ton, f.o.b. Wales in 100-lb. multiwall bags, $3 less in bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $71.50, net ton, f.o.b. Houston, 100-lb. multiwall paper bags; $68.50 in bulk.

Coronet, Fla.: Minimum phosphorus 17%, minimum calcium 34%, maximum fluorine .17%, carload $60, truckload $60.75, net ton, f.o.b. Coronet in 100-lb. multiwall bags, $57 and $57.75 in bulk.

Cincinnati: 18% phosphorus $31, sacked; 13% phosphorus $64.98, sacked, f.o.b. Cincinnati.

DICALCIUM PHOSPHATE

Chicago: Stock food grade, 18.5% phosphorus, 20,000 lb. or more $83.25 net ton in 100-lb. papers, basis Chicago Heights, Ill., or Nashville, Tenn.; less than 20,000 lb. $93.25; 21% phosphorus, 20,000 lb. or more $94.50, basis Chicago Heights and Nashville; less than 20,000 lb. $104.50; bulk boxcars or hoppers $3 net ton less than bagged material.

Bonnie, Fla.: Minimum phosphorus 18½%, granular $83.25; freight equalized with closest producing point, carload basis.

Texas City, Texas: 18.5% minimum phosphorus, 21% minimum calcium, 24% maximum, granular $77.70 net ton, f.o.b. Texas City in 100-lb. multiwall bags; bulk, boxcars and hoppers, $3 net ton less than bagged material.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum 25% calcium, maximum .01% fluorine guaranteed $83.25, f.o.b. Columbia, in 100-lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Minneapolis: 18.5% phosphorus, 24% calcium granular or fine ground $94.10, delivered; $3 less in bulk.

Trenton, Mich.: Minimum phosphorus 18½%, maximum fluorine .03% guaranteed $83.25, f.o.b. Trenton in 100-lb. multiwalls; minimum phosphorus 21%, maximum fluorine .03% guaranteed $94.50, f.o.b. Trenton in 100-lb. multiwall bags.

Denver: Demand good; trend firm; supply ample; $96.

Cincinnati: 18½% phosphorus $92@93.

Portland: Demand slow; supply ample; trend unchanged; $115.

DISTILLERS DRIED GRAINS

Philadelphia: Slow demand; light receipts; $63.

San Francisco: Demand fair; supply ample; solubles $85.

Cincinnati: Demand poor; trend steady; supply adequate; $52.

Louisville: Demand good; trend steady; supply fair; bourbon grains: light $55, dark $56, solubles $77.

Boston: Demand active; supply short; light and dark $66.50, nominal.

New York: Demand and supply fair; trend downward; light $55 bulk, Boston; dark $57 bulk, Boston, plus $5 sacked; solubles $83 sacked, Boston.

Seattle: Demand good; trend firm; none available; $69, truck lots.

Buffalo: Demand good; trend steady to higher; supply fair; $61.50, bulk, Boston.

DRIED BEET PULP

Ft. Worth: Demand fair; supply sufficient; carlots, 50-lb. papers, December, plain or molasses $53.33, January $56.33, delivered Ft. Worth.
Portland: Demand good; supply ample; trend steady; $52.
New Orleans: Demand fair; trend steady; supply ample; $60@61.
Los Angeles: Demand good; trend unchanged; supply adequate; molasses $47.10@52.50.
San Francisco: Demand good; supply fair; $51.50.
Boston: Demand and supply steady; $56.
Milwaukee: Demand good; supply fair; plain $50, molasses $50.
Seattle: Demand good; trend firm; supply fair; $47, carlots.
Ogden: Supply average; $40@44.

DRIED BUTTERMILK

New Orleans: Demand slow; trend steady; supply ample; $11@11.50 cwt.
Los Angeles: Demand fair; trend steady; supply adequate; $11.75 cwt.
Chicago: Demand fair; none offered; medium acid nominally $11@11.25 cwt.; sweet cream $11.25@11.50 cwt., in carlots.
San Francisco: Demand fair; supply ample; 11¢ lb.
Louisville: Demand slow; trend steady; supply normal; 11¼@12¢ lb.
Minneapolis: Good demand for tight supplies; $11.25@11.50 cwt.
Milwaukee: Demand and supply fair; $10 cwt.
Ogden: Supply average; $9.70 in 50-lb. bags.
Buffalo: Demand good; trend firmer; supply very limited; $11.85 cwt.

DRIED CITRUS PULP

New Orleans: Demand fair; trend steady; supply ample; $52.50@56, f.o.b. Florida.
Atlanta: Demand fair; trend weak; supply ample; $37.50@40, f.o.b. Florida producing points, December-January; meal $37.50@40.
Los Angeles: Demand good; trend steady; supply limited; orange pulp $43 bulk; lemon pulp $41 bulk.
San Francisco: Demand and supply fair; meal $54.
Boston: Demand and supply fair; $57.50.
Buffalo: Too scarce to quote.

DRIED SKIM MILK

Portland: Demand slow; supply ample; trend unchanged; 13¢ lb.
New Orleans: Demand slow; trend steady; supply ample; $11.50@12 cwt.
Philadelphia: Slow demand; light receipts; $12 cwt.
Minneapolis: Good demand for very tight supplies; nominally $11@11.15 cwt.
Los Angeles: Demand fair; trend unchanged; supply adequate; 14¢ lb. in less than ton lots; 13¾¢ lb. in ton lots.
Chicago: Demand good; supply light; $10.50@10.75 cwt. in carlots.
San Francisco: Demand and supply fair; 13½¢ lb.
Cincinnati: Demand fair; trend steady; supply adequate; 10½@10¾¢ lb.
Louisville: Demand dull; trend steady; supply normal; 11½@12¢ lb.
Boston: Demand good; supply short; 12¢ lb.
Milwaukee: Demand and supply fair; $11 cwt.
Ogden: Supply average; $15.15, 100-lb. drum.
Buffalo: Demand good; trend steady; supply ample; spray $10.65 cwt.

DRIED WHEY

Ft. Worth: Demand fair; supply adequate; carlots, standard $6, December, delivered Ft. Worth; $6.25, December, ton lots, f.o.b. warehouse, Ft. Worth.
New Orleans: Demand fair; trend unchanged; supply adequate; $6@6.50 cwt.
Portland: Demand slow; supply ample; trend unchanged; $7 cwt.
Minneapolis: Fair demand; fair supply; price quoted at $5.50 cwt., producer's point, for both regular and partially delactosed.
Philadelphia: Slow demand; light receipts; $6.25 cwt.
Los Angeles: Demand fair; trend unchanged; supply adequate; $6.16 cwt. in carloads; $6.40 cwt. in l.c.l.
Chicago: Demand fair; supply adequate; $5.50, f.o.b. plant.
San Francisco: Demand steady; supply good; $5.50 cwt.
Cincinnati: Demand fair; trend steady; supply adequate; $6.15 cwt.
Louisville: Demand slow; trend steady; supply ample; 6@6½¢ lb.
Boston: Demand steady; supply light; 5½¢ lb.
Seattle: Demand and trend steady; supply good; $6.40 cwt., ex-warehouse, l.c.l.
Ogden: Supply normal; $6.90, 100-lb. bag.

FEATHER MEAL (HYDROLYZED)

Ft. Worth: Demand fair; supply moderate; 85 to 87% protein $95, f.o.b. trucks, north Texas plants.
Atlanta: Demand and trend strong; supply barely ample; $100.50, f.o.b. producing plants, December-January.
Los Angeles: Demand good; trend steady; supply ample; $1.25 a unit of protein.
Boston: Demand good; supply tight; $85.

FISH MEAL

Ft. Worth: Demand good; supply limited; 60% Angola $163, f.o.b. Houston prompt.
Portland: Demand slow; trend steady; supply ample; $2.25 a unit, f.o.b. Vancouver.
New Orleans: Demand light; supply limited; trend steady; menhaden 60% $155@160; scrap $139@143, f.o.b. Gulf.
Los Angeles: Demand fair; trend stronger; supply light; local production, 60% protein $2.40 a unit.
Chicago: Demand good; supply tight; eastern menhaden fish meal, 60% protein $160@165; Gulf, no offerings; western blended, 60% protein, no offerings; Northwest herring-salmon blend, no offerings; Canadian herring, 73% protein $2.20@2.36 a unit of protein, subject to production.
San Francisco: Demand good; supply tight; imported $2.42½ a unit of protein.
Cincinnati: Demand fair; trend steady; supply adequate; $164.
Boston: Demand very active; supply short; imported $161.
Milwaukee: Demand and supply fair; 60% $160.
Minneapolis: Good demand; supply adequate; price slightly firmer for 60%; $175@177 delivered Minneapolis in truck lots.
Atlanta: Demand good; trend strong; supply very limited; imported $160@161, ex-vessel, January-February arrival.
Denver: Demand good; trend strong; supply very tight; $2.35 a unit of protein, f.o.b. West Coast.
Seattle: Demand fair; trend steady; supply good; $2.32 a unit protein, truck lots (Canadian production).
Ogden: Supply average; $2.20 a unit, f.o.b. Coast; 65% $151@153 ton.
Buffalo: Demand good; trend steady; supply very scarce; 60% protein menhaden $180 bulk, nominal; $185 sacked, nominal.

HAY

Ft. Worth: Demand fair for alfalfa, practically nil for prairie and Johnson grass; supply sufficient; carlots, baled, No. 1 alfalfa $36@38, No. 2 $34@36; prairie, No. 2 $26@28; No. 2 Johnson grass $24@26, delivered Texas common points.
Portland: Demand good; trend higher; supply limited; $33@34.
Wichita: Demand poor; supply ample; prairie $12, alfalfa $12@14.
Denver: Demand poor; trend slow; supply ample; alfalfa, baled $24, first and second cutting, delivered in Denver.
Philadelphia: Demand slow; supply light; $32@35.
Los Angeles: Demand fair; trend firmer; supply adequate; U.S. No. 1 $33@35; U.S. No. 2 leafy $30@32; U.S. No. 2 green $28@30; U.S. No. 2 $24@26.
Cincinnati: Demand fair; trend steady; supply adequate; No. 1 timothy $34; No. 1 second cutting green alfalfa $31; mixed $27; wheat or oat straw $19.
Louisville: Demand fair; trend steady; supply good; No. 1 hay, any variety $23@25; No. 2 hay, any variety $21@23; any straw $20@23.
Boston: Demand and supply steady; No. 2 timothy $40@42.
Seattle: Demand and supply fair; trend firm; alfalfa, U.S. No. 2 green $32, delivered, truck lots.
Ogden: Supply average; $1 bale; $18 ton in the barn.

HOMINY FEED

New Orleans: Demand fair; trend steady; supply adequate; $50@50.50.
St. Louis: Demand good; trend steady; supply limited; yellow $48.50.
Seattle: Demand fair; trend steady; supply good; $54, carlots.
Buffalo: Demand good; trend steady to higher; supply fair; $55, bulk, Boston.
Milwaukee: Demand good; supply tight; $48.50, sacked, Milwaukee, nominal.
Boston: Demand good; supply spotty; $59.50.
Louisville: Demand slow; trend steady; supply ample; $51.
Cincinnati: Demand fair; trend higher; supply adequate; $51.50.
Kansas City: Demand slower; trend steady; supply adequate for demand but not a lot; yellow $38.50@39, bulk, $3.50 more for sacks; no white offered.
Chicago: Demand good; supply tight; $48.50@49.
Memphis: Demand nil; trend steady; supply ample; white $52, yellow $52.

LINSEED OIL MEAL

Ft. Worth: Demand fair; offerings extremely light; most mills sold up through January; carlots 34%; solvent $94@96; O.P. $100 January; pellets $2.50 premium.
Portland: Demand moderate; trend firm; supply limited; $79.
New Orleans: Demand good; trend steady; supply ample; $74@74.50.
Wichita: Demand slow; supply ample; 34% $66.
Seattle: Demand fair; trend firm; supply limited; $82, carloads, 34% protein.
Minneapolis: Excellent demand for scarce supplies; strong nominal price of $76.50@77.50 for spot bulk supplies; January price $75 bulk for solvent; expeller quoted at $75, bulk, for January.
Milwaukee: Demand good; supply fair; old process $87.50, new process $85.50, both nominal.
Boston: Demand and supply light; $87.
Louisville: Demand slow; trend strong; supply normal; old process $89.40; new process $86.90.
Cincinnati: Demand poor; trend higher; supply adequate; new process $91; old process $92.
San Francisco: Demand fair; supply ample; $70.
Kansas City: Demand good; trend firm; none offered for December; solvent meal $77.50, bulk, Minneapolis; old process $75@76, nominal.
Chicago: Demand good; supply scarce; solvent $79.50; expeller, nominally $84.50@$84.
Los Angeles: Demand fair; trend firmer; supply adequate; local production, 29% protein $66.
Denver: Demand good; trend strong; supply very tight; $85.50.
Omaha: Demand good; supply limited; 34% solvent $82, bulk; 32% old process $82, Omaha basis.
Philadelphia: Demand and supply fair; trend unsettled; 34% $91.50.

MALT SPROUTS

New Orleans: Demand fair; trend steady; supply limited; $45.50@47.
Chicago: Demand fair; supply adequate; No. 1 $43@43.50.
Cincinnati: Demand fair; trend steady; supply adequate; No. 1 $50.
Boston: Demand and supply limited; $42.50.
Milwaukee: Demand good; supply fair; odd weights $43; even weights $45.

MEAT AND BONE MEAL

Ft. Worth: Demand fair; production light; meat and bone, 50% $105, f.o.b. or delivered, Ft. Worth.
Portland: Demand slow; supply ample; trend unchanged; $1.60 a unit.
New Orleans: Demand good; trend steady; supply adequate; $95.50@98.
Wichita: Demand strong; supply insufficient; 50% $112.50, f.o.b. plant; 55%, no quotations, no offerings.
St. Paul: Fair demand; fair supplies; slightly firmer trend; 50% meat and bone meal $110@116.
Denver: Demand excellent; trend firm; supply slightly short; 50% $100 truck lots, small lots $103.
Los Angeles: Demand good; trend stronger, supply tight; 50% protein $1.90 a unit.
Omaha: $115.
St. Louis: Demand good; trend higher; supply short; $120.
New York: Demand good; trend steady; supply tight; 50% $95, 55% $105, bulk; 50% $98, 55% $108, sacked.
Seattle: Demand and supply good; trend steady; $80, ex-warehouse, 50% protein.
Buffalo: Demand good; trend strong; supply ample; 50% meat scraps $105 bulk, $110 sacked.
Ogden: Supply average; $97.50, in 100-lb. bags.
Chicago: Demand fair; supply adequate; 50% protein $105@110.
Kansas City: Demand very good with some heavy trading reported this week; trend strong; supply very tight; 50% meat and bone scraps $115.
San Francisco: Demand good; supply ample; $1.80 a unit of protein.
Cincinnati: Demand good; trend very good; supply short; 50% meat and bone scraps $112.50.
Louisville: Demand fair; trend steady; supply good; $95@100.
Boston: Demand active; supply short; $1.65 a protein unit; converted 50% $95.

MILLFEED

Minneapolis: Very good demand for supplies which are still tight but a little easier to find than in the past two weeks; mildly softer undertone; standard bran $49.50@50, standard midds. $49.50@50, red dog $51@52.
Kansas City: Demand slacked off; trend weaker for the first time in about three months; supply ample at the moment, although this may be temporary holiday situation; bran $45.25@46, shorts $43.50@44.25, sacked; bran $42@42.75, shorts and middlings $42@42.75, bulk.
Wichita: Demand good; supply adequate; basis Kansas City: bran $46.75@47.25, shorts $46.25@46.75; bran advanced 75¢@$1 and shorts $1, compared with the preceding week.
Omaha: Demand good; supply limited; sacked bran $48.50; sacked gray shorts $51; bulk standard midds. $49.30, all Omaha basis.
Ft. Worth: Demand slackening; supply sufficient; carlots, burlaps, prompt, bran $54.50; gray shorts $54; bulk middlings $52@52.50, delivered Texas common points; $1 lower on bran and $1.50 lower on shorts and $2 lower on middlings compared with previous week.
Chicago: Millfeeds eased a trifle during the week ending Dec. 23, with the dip occurring in the last two days. Observers said feed manufacturers seem to have built their inventories sufficient to permit a slowdown in buying for awhile. Quotations: bran $53.50, standard midds. $54, flour midds. $55, red dog $56.
St. Louis: Demand good; trend steady; supply limited; bran $51.25@51.75, shorts $50.25@50.75, sacked; bran $48@48.50, shorts $49@49.50, middlings $48.50@49, bulk.
Cincinnati: Demand fair; trend higher; supply adequate; bran and middlings $59.50.
Philadelphia: Demand and supply fair; trend unsettled; bran $64, standard midds. $65, red dog $68.
Boston: Demand good; supply tight; bran $63, middlings $64.
Buffalo: The holiday lull continued in the millfeed market last week and pressure to make sales forced prices sharply lower. Competition from Canada and Ohio became more pronounced and levels here went substantially below western markets.

For DEHYDRATED ALFALFA—

BETTER DISPERSION!
DUST-FREE! FREER FLOWING!
MORE UNIFORM!

CONSOLIDATED BLENDERS INC.
Fremont, Nebr. • Phone Park 1-7000
*TRADE MARK

FEED GRAINS
KAFIR-MILO
BARLEY - CORN - OATS - WHEAT
From Every Grain Producing Area in United States
CONTINENTAL GRAIN COMPANY

OFFICES:

New York, Chicago, Kansas City, St. Louis, Omaha, Columbus, Memphis, Norfolk, Nashville, Enid, Minneapolis, Louisville, Fort Worth, Buffalo, Toledo, Houston, Galveston, Portland, San Francisco, Vancouver, B.C., Winnipeg, Los Angeles

TERMINAL ELEVATORS:

Kansas City, St. Louis, Chicago, Buffalo, Omaha, Toledo, Columbus, Fort Worth, Portland, Boston, Galveston, Enid, Minneapolis, Norfolk, San Francisco, Nashville, Louisville, Memphis, Houston

Both bran and middlings ended $3 lower. Red dog declined $1. Quotations Dec. 23: bran $53.50@54, standard midds. $54.50, red dog $58@59. The bulk differential on both bran and middlings held unchanged at $5.

New York: Demand and supply good; trend stronger; bran $63.50@64; standard midds. $64@64.50.

New Orleans: Demand fair; trend steady; supply adequate; bran $57.50@58.25, shorts $57@57.75.

Memphis: Demand good; trend steady; supply scarce; wheat bran $55, gray shorts $54.50, standard midds. $54.50.

Louisville: Demand fair; trend strong; supply ample; bran $58.10, mixed feeds $58.35, shorts $59.10, middlings $62.80.

Denver: Demand good; trend strong; supply limited; shorts $46.75, bran $46.75, mill run $46.75.

Seattle: Demand good; trend firm; supply fair; $44, common transit points, carlots.

Portland: Demand good; trend higher; supply limited; $41.

Ogden: Supply normal; to Utah and Idaho: red bran and mill run $44, middlings $49; to Denver: red bran and mill run $51, middlings $56; to California: red bran and mill run $51.50, middlings $56.50, f.o.b. San Francisco and Los Angeles.

Los Angeles: Demand good; trend firmer; supply light; standard mill run $50@52, red bran $60@62.

San Francisco: Demand good; supply tight; millfeed $52.50, red bran $62.50.

MINERAL FEED

Wichita: Demand good; supply insufficient; all-purpose with iodine, 50-lb. blocks $95, 100-lb. bags $90, f.o.b. plant.

Ft. Worth: Demand fair; supply ample; all-purpose granules $89, block $94; mineral phosphorus 6% granules $106, block $110; cattle-sheep mineral 7% phosphorus granules $99, block $103; hog mineral phosphorus 3½% granules $38; phosphorus 2% $78 (all in 50-lb. paper bags).

Portland: Demand slow; supply ample; trend unchanged; $48.

Denver: Demand good; trend steady; supply ample; $155.

San Francisco: Demand steady; supply good; all-purpose with iodine $70.

Seattle: Demand fair; trend steady; supply good; mixer mineral $48, ex-warehouse; all-purpose mineral $85, ex-warehouse.

Ogden: Supply average; $113 in 50-lb. blocks; $103, granular, 50-lb. bags.

Sioux City: 50-lb. mineral blocks 8.2% phosphorus $92; 7.6% phenothiazine sheep mineral blocks $4 each.

MOLASSES

Ft. Worth: Demand good; supply sufficient; blackstrap 13¢ gal., f.o.b. Houston; delivered Ft. Worth, truck $29 ton, seller's market price on date of shipment.

Buffalo: Demand and supply good; trend steady; 16½¢ gal., f.o.b. Albany.

New York: Demand fair; trend steady; supply good; blackstrap 16¢ gal., tank cars, tank wagons, f.o.b. New York.

St. Louis: Demand fair; trend higher; supply ample; 13¢ gal., New Orleans.

Seattle: Demand fair; trend easy; supply good; $23, f.o.b. Seattle, tank car lots or truck lots.

Minneapolis: Demand fair; supply good; price at 12½¢ gal., f.o.b. New Orleans, with a slightly firmer undertone.

Denver: Demand fair; trend steady; supply ample; 13¢ gal., New Orleans; $22.23 ton.

Memphis: Demand fair; trend higher; supply adequate; blackstrap 13¢ gal., tank car, f.o.b. New Orleans, and $29.50 ton, delivered Memphis, truck.

Atlanta: Demand good; trend steady; supply ample; citrus $20@22, bulk, f.o.b. Florida producing points, December-January.

Los Angeles: Demand good; trend steady; supply adequate; $23 bulk, f.o.b. tank cars; $23.25 bulk, f.o.b. tank trucks.

Kansas City: Demand good; trend firm; supply adequate, though not plentiful since domestic crop production is completed; 13¢ gal., tank car, New Orleans.

San Francisco: Demand and supply good; $23, f.o.b. cars, Richmond, Cal.

Cincinnati: Demand fair; trend steady; supply adequate; 13¢ gal., New Orleans.

Louisville: Demand fair; trend steady; supply normal; 12½¢ gal., tank car lots, f.o.b. Gulf ports.

Boston: Demand good; supply ample; 16½¢ gal. in tank cars.

Milwaukee: Demand and supply fair; blackstrap 13¢ gal., f.o.b. New Orleans.

NIACIN

New York: Trend steady; $8 kilo, 10-kilo lots; $8.20 kilo, 5- and 2½-kilo lots; $8.30 kilo, 1-kilo lots; freight prepaid or paid to destination.

OAT PRODUCTS

Portland: Demand slow; supply ample; trend unchanged; rolled $63, ground $60, cleaned $63.

Ft. Worth: Demand fair; offerings light for nearby delivery; oat millfeed $48.70; reground oat millfeed 3% protein, sacked $39.70.

Seattle: Demand and supply fair; trend steady; $53, bulk, truck lots.

Philadelphia: Demand slow; supply fair; pulverized white $55.

Minneapolis: Fair demand for pulverized; market generally a little quiet with the holidays; adequate supplies; feeding rolled oats $77@79; feeding oatmeal $67@69.50; crimped oats $56; pulverized $44@46; reground $20@21.

COB ABSORBENT FEED BASE
HARD WOODY RING PARTICLES REMOVED
Mixed With Molasses for Livestock Feed
Will Absorb More Than 5 Times Own Weight
Bagged in 4-Ply Sewed Paper Bags
TI-CO INDUSTRIES, INC.
TIPTON, INDIANA — ELWOOD, INDIANA
P. O. BOX 185 — FEDERAL 2-5942

MANEY BROS. MILL & ELEV. CO.
Minneapolis, Minnesota
Feed Ingredients of All Kinds
FORMULA MIXING FOR DEALERS
Excellent References

Memphis: Demand fair; trend steady; supply scarce; 3¼% protein, reground oat feed $27.25.

Los Angeles: Demand fair; trend steady; supply adequate; pulverized, local production $64.

Chicago: Demand fair; supply scarce; reground oat feed $21@21.50; fine ground feeding oatmeal $70; feeding rolled oats $79@80.

Cincinnati: Demand poor; trend steady; supply adequate; reground oats $20.50; pulverized white oats $49; rolled oats $83@86.

Louisville: Demand fair trend slightly stronger; supply ample; reground $27.30, rolled $84.80, feeding $78.80, pulverized $52.80, crimped $67.30.

Boston: Demand and supply steady; white pulverized $57; reground oat feed $22.

OYSTER SHELL

New Orleans: Demand good; trend steady; supply plentiful; $19@19.50.

Portland: Demand slow; trend unchanged; supply ample; western $34, eastern $38.50, granite grits $26, shell flour $24.

Seattle: Demand and trend steady; supply good; eastern $35, carlots.

Los Angeles: Demand fair; trend steady; supply adequate; $14.80.

San Francisco: Demand fair; supply ample; local $15, eastern $26.

Cincinnati: Demand fair; trend steady; supply adequate; $23.45.

Louisville: Demand good; trend steady; supply ample; in 80-lb. paper $22.85, in 50-lb. paper $23.10, in 25-lb. paper $25.35.

Boston: Demand and supply steady; $25 in paper.

PEANUT OIL MEAL

Atlanta: Demand good; trend steady; supply very limited; 45% $61.50, f.o.b. producing mills, December-January.

Milwaukee: Demand and supply fair; 26% $42.

PEAT MOSS

Portland: Demand slow; supply ample; trend unchanged; $3.25 bale.

Los Angeles: Demand fair; trend steady; supply adequate; Canadian, 6.1 cu. ft. bales $3.75.

Philadelphia: Slow demand; light receipts; $2.90 bale, f.o.b. pier.

San Francisco: Demand and supply fair; $3.65 bale.

Boston: Demand slow; supply adequate; $3.15 bale.

New York: Demand good; trend upward; supply fair; Canadian, 7 cu. ft. bale, veneer wrapped $3.32, f.o.b.; German, 7½ cu. ft. bale $2.95, at dock, New York.

Seattle: Demand poor; trend easy; supply good; $2.70 bale, truck lots.

Chicago: Demand fair; supply short; $3.60 @3.70, standard 7½ cu. ft. bale.

POTASSIUM IODIDE, U.S.P.

Chittenango, N.Y.: Demand good; supply adequate; 90% KI stabilized with calcium stearate, 200 lb. in 100-lb. cartons $1.35; 100-lb. cartons $1.36; freight prepaid to destination.

Cincinnati: Demand good; trend steady; 90% KI in calcium stearate or carbonate mixtures, 250-lb. drums $1.35; 200 lb. in 100-lb. drums $1.35; 100-lb. drums $1.38; 25-lb. drums $1.41, f.o.b. Cincinnati.

POULTRY BY-PRODUCTS

Ft. Worth: Demand fair; supply moderate; 55% protein $100, f.o.b. north Texas plant.

Los Angeles: Demand fair; trend steady; supply ample; $1.60 a unit of protein.

Boston: Demand fair; supply tight; $100.

Atlanta: Demand good; trend strong; supply ample; $106.10, f.o.b. producing points.

RIBOFLAVIN

New York: Trend steady; feed grade (in feed supplements) 4½¢ gm. in 3.36 to 16 gm./lb. mixtures, freight prepaid or paid to destination.

Cincinnati: Trend steady; feed grade (in feed supplements) 4¢ gram in less than ton lots in 3.36 to 16 gm./lb. mixtures, 3¢ in ton lots or more; freight prepaid or paid to destination.

RICE BY-PRODUCTS

Ft. Worth: Demand good for export, slow for domestic at present price; offerings light; carlots, rice bran $42@43, nominal, f.o.b. south Texas rice mills; hulls $2, f.o.b. mills.

San Francisco: Demand good; supply ample; bran $45; polished $49.

Los Angeles: Demand steady; supply limited; trend stronger; bran, California production, high fat content $57.

SCREENINGS

Ft. Worth: Demand almost nil; supply sufficient; ground $28.

Buffalo: Demand and supply fair; trend steady to higher; ground $38, New York; unground, bulk $31, New York.

Minneapolis: Demand good for light supplies; Canadian screenings a little higher; lights $10@20, mediums $21@30, heavies $31@40; Canadian bulk $26; Canadian ground $36; flaxseed screenings $36; oil type flaxseed screenings $43, basis 15%.

Cincinnati: Demand fair; trend steady; supply adequate; malt house $32; Canadian $33, bulk.

Chicago: Demand fair; supply adequate; ground grain screenings $34; Canadian, bulk $29.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Atlanta: $20.40@20.67.
Buffalo: $25.31@25.45.
Chicago: $24.77@24.90.
Cincinnati: $23.47@23.60.
Des Moines: $25.23@25.35.
Kansas City: $24.88@25.
Memphis: $22.20@22.47.
Minneapolis: $25.92@26.06.
Philadelphia: $24.32@24.95.
St. Louis: $24.14@24.27.

SORGHUMS

Ft. Worth: Demand fair; supply sufficient; carlots, bulk, No. 2 yellow milo $2.24@2.26, delivered Texas common points.

Los Angeles: Demand steady; trend unchanged; supply adequate; milo $3.47½ cwt.

SOYBEAN OIL MEAL

Milwaukee: Demand good; supply fair; $60, bulk, Decatur.

Boston: Demand good; supply fair; 44% $60, 50% $70, both bulk, f.o.b. Decatur.

Louisville: Demand slow; trend steady; supply normal; $75.70.

Cincinnati: Demand fair; trend higher; supply adequate; $64.50, bulk, Decatur.

San Francisco: Demand good; supply tight; $93.50.

Kansas City: Demand not too much, but good enough to keep all supplies cleaned up, tight for nearby; trend firm; meal for Kansas City and western shipment $62@65, bulk, Decatur; unrestricted $65@66.

Chicago: Prices of soybean oil meal climbed further during the week ending Dec. 23, pushed by an eager demand from feed manufacturers. Nearby supplies are tight, and January shipment meal is getting difficult to get. The phenomenal demand for meal from feed manufacturers is said to be responsible for the continued market rise. Quotations: 44% protein soybean oil meal, bulk, unrestricted, basis Decatur $63@64; eastern restricted $62@63; 50% bulk, unrestricted, basis Decatur $70; eastern restricted $68.50@69.

Denver: Demand poor; trend steady; supply fair; $81.50, Denver, nominal, January.

Philadelphia: Demand and supply fair; trend unsettled; 44% $61.50, bulk, Decatur, nominal.

Atlanta: Demand fair; trend strong; supply adequate; 44% $72.

Los Angeles: Demand good; trend firmer; supply scarce; $91.50@92.50.

Omaha: Demand good; supply tight; 44% $69.50, bulk, delivered Omaha.

Memphis: Demand fair to good; trend steady to higher; supply ample; prime 44% solvent $67, sacked, f.o.b. Memphis.

Ft. Worth: Demand good; supply sufficient; carlots, 44% $80@84, December-January, depending on origin; truck meal 44% $76@77.

New Orleans: Demand fair; trend steady; supply adequate; $67@68.

Portland: Demand moderate; trend higher; supply tight; $60, f.o.b. Decatur.

Wichita: Demand good; supply adequate; 44% $76, 50% $84, f.o.b. Wichita.

St. Louis: Demand good; trend higher; supply limited; 44% $75.

Seattle: Demand fair; trend firm; supply ample; $95, carlots.

Ogden: Supply normal; $81@86.

Minneapolis: Demand continues excellent for tight supplies; price advanced to $62, bulk, Decatur, for spot supplies of 44%, January quoted at $58.50, bulk, Decatur, for Minnesota; 50% $68.50 for January, bulk, Decatur.

TANKAGE

Louisville: Demand good; trend steady; supply ample; 60% $105@110.

Cincinnati: Demand good; supply fair; trend strong; 60% digester $116.

Kansas City: Demand very good; trend strong; supply tight; 60% digester $118.

Chicago: Demand fair; supply ample; 60% protein $107.50@115.

Omaha: $122.

Ft. Worth: Demand fair; supply extremely scarce; 60% digester $108@110, f.o.b. Ft. Worth.

New Orleans: Demand fair; trend steady; supply ample; $114@115.

Wichita: Demand strong; supply insufficient; 60% $115, f.o.b. plant.

St. Louis: Demand good; trend higher; supply short; $120.

St. Paul: Fair demand for fair supplies; price a little higher; 60% digester $111 @114.

VITAMIN E FEED SUPPLEMENT

Cincinnati: Demand good; trend steady; any quantity in 100-lb. drums $1.50; in 25-lb. drums $1.55; freight allowed to destination.

New York: Demand and supply good; trend steady; 100-lb. drums $1.50 lb., 25-lb. drums $1.55 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

Rochester, N.Y.: Demand and supply good; trend steady; 100-lb. drums $1.50 lb., 25-lb. drums $1.55 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand good; supply limited; 7½¢ lb., f.o.b. north Texas area.

WHEAT GERM MEAL

New Orleans: Demand and supply fair; trend unchanged; $103@106.

Buffalo: Demand fair; trend steady to higher; supply poor; commercial grade $76.

Chicago: Demand off; supplies fair; price down to $77 for first half January.

CROP

(Continued from page 1)

down to some extent by below-average acreages of most crops, rose far beyond other big crop years. The year was the biggest of record in production of wheat, corn, soybeans, barley, sorghum grain, hay, popcorn and tung nuts. The condition of pastures during a long grazing season was widely reported to be the best in many years. Large to near-record crops of oats, peanuts, potatoes, sugarbeets, dry beans and others were produced.

Growing conditions were favorable for the farmer in this production year, USDA reported. "Weather seemed to be working for farmers throughout the entire cycle from before seeding until after harvest. Soil moisture was more generally adequate for seed germination and plant growth than in most years. Irrigation water supplies were ample. Moderate temperatures favored full growth and maturity and dry fall weather aided rapid and successful harvest. Weather benefits thus contributed directly to crop success and also gave added effectiveness to the many advancing techniques increasing farmers' production efficiency," the report said.

Feed Grains

Feed grains and oilseed crops, those of most interest to the feed industry, had a particularly productive year. With favorable weather, corn brought the nation its biggest crop in history with 3.8 billion bushels, more than a tenth higher than a year earlier and well above the old champion, 1948, when corn acreage was almost one sixth larger.

Oats acreage was reduced to the lowest level in many years by wet weather in southern parts of the spring oats area and some winter-killing of fall plantings. A record yield per acre, however, still provided an above-average crop. Barley shared the conditions favoring the other small grains and produced a record high yield and production from acreage slightly under that of a year ago.

Sorghum grain appeared to be heading for a smaller year after many growers in the Plains States increased wheat, thus reducing sorghum grain acreage one seventh. But new varieties and ideal growing conditions brought production of a tenth higher than a year earlier. The total result for the four feed grains was production of one tenth more than the previous record set last year.

Oilseeds

Oilseed crops shared the fortune of feed grains. The soybean crop had its best year. Acreage made another successive annual expansion, yields reached a new high and production moved up again for the fifth successive year. Cotton acreage was reduced sharply to the smallest total since 1876, but despite some lateness and wet weather in central states, extremely high yields from the irrigated crops in the Southwest as well as other sections set new record per acre yield levels and brought larger production of lint and seed than in 1957. Flaxseed acreage reduction held down the production of this crop to 4% below average although the season was favorable and the per-acre yields were the second highest since 1906.

The report said total oilseed tonnage produced reached a new high, 17% larger than the previous record set in 1957.

Forage production in most areas in 1958 was also the largest in many years. Hay yield per acre and total production slightly exceeded former record levels. Silage yields were high, whether of corn, grass or sorghums. Pasture and ranges continued to supply good grazing longer and more abundantly than usual over wide areas. The part played by good pastures during the year was reflected in excellent livestock gains, strong demand for stocker and feeder livestock and record high milk production rates per cow.

Swift Will Open New Mississippi Hatchery

FLOWOOD, MISS.—E. P. Hedgecock, manager of the Jackson (Miss.) Swift poultry processing plant, has announced that operation is scheduled to get underway Jan. 1 on a new Swift hatchery.

Mr. Hedgecock said the expansion of hatching egg flocks and broiler production in Mississippi was a strong factor in the Swift & Co. decision to build the hatchery.

The new building in Flowood, near Jackson, is a one-story structure, 48 x 115 ft. with brick facing. A starting capacity of 60,000 chicks weekly will be maintained, and plans are to expand this output to 100,000 chicks weekly.

Paul Purdhomme has been named manager of the new hatchery. He began his career with Swift in Paris, Texas.

The company plans to establish breeder flocks within a 75-mile radius of Jackson.

SURVEY

(Continued from page 83)

osophy in selling and servicing the farmer will be on the basis of assisting them in becoming better business people, analyzing their cost, improving their efficiency, lowering production costs."

Northeastern firm: "New programs that are geared to changing agriculture."

Midwestern firm: "Horizontal integration—not vertical!"

Southwestern firm: "Our main effort will be directed to independent dealers and through them to independent individual feeders. We intend to point out the advantages of being free from mass regulation, mass control and resultant hysteria."

Southwestern firm: "Personal, on-the-farm selling."

Midwestern firm: "Essentially better personnel development in sales and dealer upgrading."

Southwestern firm: "Personal contact—stressing better feeding programs from start to finish."

Southwestern firm: "Concentrating on dealer education and expansion in number of egg production units. Increased emphasis on research."

What do you regard as major obstacles to be overcome in developing larger volume in 1959? What other problems do you anticipate?

Many of the feed manufacturers mentioned prospective lower prices on hogs, broilers and eggs as being principal problems in improving or maintaining feed business. Just plain intense competition was cited, too. Problems in connection with credit, financing and having adequate working capital were mentioned frequently also. Some of the manufacturers mentioned increased feed manufacturing capacity as being a problem, and some larger firms noted the competition from small mills.

Here are some of the comments:

Midwest company: "Complacency on part of dealers and feeders. Competition from local mix complete feeds."

Northwest firm: "Distribution costs. Special mixes for special customers."

Midwest firm: "Price cutting. Seems price lists mean nothing as far as price to user is concerned."

Midwest firm: "Credit and 125% financing."

Midwest firm: "The problem of integrated feeders or those financed by others. Profits per ton of feed will decline."

Southwest mill: "Proper financing for different forms of integration—also for company-owned projects."

Southwest company: "Need sanity in credit and financing. Over-production."

Multiple-unit firm: "High quality over-all in products, policies and promotion of our competition."

Western firm: "Intense competition."

Western firm: "Tendency for feeders to feed straight grain, mix own feed and take other short cuts in face of lower margins."

Southern firm: "Over-production in hogs, broilers, eggs because of easy credit."

Integrated company: "Problem is selection of growers to raise and care for poultry and turkeys; also marketing of eggs."

Midwest firm: "Competition of direct selling. Guarantees and other deals being promoted. Need of large amounts of capital to finance dealers and feeders."

Southeastern firm: "Farmer credit and lower prices for eggs, etc."

Southwestern firm: "Financing. Advances made by hatcheries and in feed manufacturing not enough to equal lower broiler prices; will have to lower grower guarantees in some areas. Obsolescence will require more capital expenditures."

Eastern and southern firm: "Low broiler prices. Keener competition."

Russell Reed

NUTRITION DIRECTOR — Russell Reed has been appointed director of nutrition for Burrus Feed Mills, Ft. Worth, Texas, according to Charles Harris and Wesley Ballmann, co-managers of Burrus. Mr. Reed will work in feed research, both in the field and laboratory, on livestock and poultry nutrition. He was at one time assistant county agricultural agent in Ft. Worth, and has served as superintendent of Texas Agricultural Experiment Station 21 at Gonzales, Texas. While there he specialized in poultry nutrition, concentrating mainly on broilers. Mr. Reed has authored and co-authored several scientific papers with emphasis on vitamins, antibiotics, unidentified factors, methionine and high calorie rations in poultry feeding. He holds an M.S. degree from Texas Tech.

Eastern firm: "Getting our sales story across and understood by greater numbers."

Western firm: "Use and availability of dollars for expansion. Having adequate market for finished product. Buying groups could be factor and adversely affect margins."

Do you have any comment on such problems or trends as credit and financing, medicated feeds, working capital requirements, smaller plants closer to feeders?

Most of the comments were on credit and financing and the trend toward smaller plants. The feed men were pretty unanimous in expecting more credit and financing with the trend toward larger feeders, and a number again called attention to the need for curbing loose financing. With more financing, integration, etc., working capital requirements, of course, increase. Some firms, where actual integration of poultry operations is involved, look for less financing of producers as such. And some companies look for 100% financing and contract farming to take over a large share of the feed tonnage.

Almost all firms, including large as well as small local area businesses, see a continuing trend toward smaller plants closer to feeders. Some firms expect to use "satellite" mills. Smaller companies which have been serving local areas without dealer set-ups, as would be expected, feel direct operations are more effective. Attention was called to more mobile mills, too.

Here are some of the comments on the above question:

Multiple-unit company: Credit in some form will continue to increase. Trend toward smaller plants will continue."

Multiple-unit firm: "Must handle credit carefully. Claims by drug firms must be tempered. Definite demand for smaller plants."

Multiple-unit company: "Working capital requirements of dealers as well as manufacturers will increase."

Midwest firm: "Believe the feeling is almost unanimously against consumer advertising by producers of additives or medication."

Midwestern firm: "Will be heavier borrowings by feed manufacturers from banks. Big mill will have bulk blending or satellite mills."

Midwest company: "Too bad feed companies can't see their way to finance only their products instead of everyone else's."

Multiple-unit firm: "Don't like to be bankers but apparently must be. Should eliminate unsound practices like long-term bookings."

Midwest manufacturer: "The big change in our area is number of mobile units making complete feeds on farm. More elevators have put in grinding and mixing equipment."

Local area firm: "Have always believed the only way to service feeders satisfactorily is smaller plants serving area of 50 miles direct to farmer.

Midwest firm: "Whole credit system must be revised for many to survive."

Midwestern company: "Hope to add a small plant this coming year to test idea of smaller (100 tons per day) plant close to feeders."

Mountain States firm: "Too much loose financing by tonnage-hungry mills. Turkeys are moving to same position as broilers."

Southwestern firm: "Credit should tighten; integration should cause less financing. Fewer claims should be made for medicated feeds. Bulk stations can supplant small plants near feeders."

Western company: "Have been able to sell customers on logic that credit and financing cost money and the user pays cost plus overhead, and that more successful operators arrange own credit. Tendency of large feeders to build own mills will continue."

Southwestern firm: "Believe less, not more, medication is in offing."

Southwestern company: "One hundred percent financing and contract farming will take over large share of volume within five years."

Midwest firm: "Direct selling by smaller manufacturers as well as some large firms with sectional plants is becoming more a problem of competition."

Local area firm: "Direct basis is more effective."

Midwest company: "New PCA financing will be a big factor. SBIC's will help capital requirement problem for medium-size mills. Smaller plants closer to feeder are only answer."

Southeastern company: "More credit should be handled by bankers."

One-plant company: "Margins will be closer and this will cause tightening of financing."

Southeastern firm: "Capital tight."

Eastern and southeastern firm: "So-called integration will require greater capital and reduce some credit problems."

Eastern and southeastern company: "In many areas feed has become a by-product for feed manufacturers, the end products being meat and eggs. This greatly increases working capital requirements. Feed must be produced reasonably close to feeding operation, and volume must cover costs of efficient plants."

Eastern firm: "The trend to producing feed closer to feeders is making it easier for us to work our plant to capacity."

West Coast firm: "Higher replacement costs and investments necessitate complex financing."

Western firm: "Will be more plants closer to feeders; must take into consideration economics in selling and servicing."

West Coast firm: "More credit and financing. Smaller plants should find many advantages."

What effect do you feel integration, contract farming, farm specialization and similar developments will have on your business?

Most of the responses to this question dealt with integration, and virtually all respondents feel that it will continue to increase, although some do not expect much immediate effect on their businesses. Some of the manufacturers, depending on area, are already highly integrated. Others, apparently not yet involved, indicate that they will be getting into integrated programs more. Some feel that the development will create significant volume or other problems for their particular types of operations. Also, it is noted that this may contribute to some shifts of feeding operations from the Midwest to the South, for example. In general, for many, it appears to be a case of swinging with the trends and adapting to them as individual firms feel they can best do it. Some firms look for definite tonnage increases with more specialization and integration.

Some comments on this question follow:

Multiple-unit firm: "Feel it will improve our volume."

Multiple-unit company: "No more effect than it has had. Feed industry has had part in contract farming and will continue to have."

Corn-hog area firm: "Not too much effect for two or three years. After that it could hurt our business if greater per cent of hog, cattle and egg production is moved from our area."

Northwest firm: "Feed manufacturer will have to assist grower in producing for a market and assist in marketing."

Midwest firm: "Less dealer business, more direct."

Midwest company: "It will put us in the banking business."

Corn-hog area plant: "No particular effect on our business."

Midwest firm: "These trends will make us integrate."

Southwest company: "We are joining the parade because we think these things are now a part of farming."

Southwest firm: "We will swing with the punches, trends, habits, actions—but not on damn fool credit policy of many mills."

Multiple-unit firm: "Will adapt to changes as they come. Experimenting with several varieties of integration."

Southern firm: "We are integrating our own business."

Southwest firm: "Eventually this will be normal, but during early stages many folks who rush into it will lose money. The weak sisters jump on these things first."

Southwestern company: "We are closely integrated."

Midwestern firm: "Since we operate through a dealer organization, integration will create some serious problems."

Midwest firm: "So-called 'captive' business will be a higher per cent of total volume in each year ahead."

Southern firm: "Contract farming probably won't be any more of a factor in 1959 than in '58."

Southwest firm: "Feel integration is here to stay and rapidly developing complete programs as close to mill as possible."

Southeastern firm: "We're integrating."

Southern firm: "Will increase volume as these programs become more effective."

Eastern company: "Farm specialization increases capital investment requirements."

Eastern firm: "Will continue to narrow number of prospects."

Eastern firm: "Will result in new and different programs."

West Coast firm: "Business will

Ray Norton

PRODUCTION MANAGER — New production manager for the Supersweet Feeds division of International Milling Co., Minneapolis, is Ray Norton, former plant engineer for International. He has been with the firm since 1942. He became eastern division engineer at Buffalo in 1947 and was transferred to Minneapolis in 1951 as central division engineer. In 1952 he was made milling engineer for the firm, and in 1956 he was promoted to the position of plant engineer. He will make his headquarters at International's general offices in Minneapolis.

---

depend on ability to finance operations."

Western company: "Do not expect any effect for 1959, but factor to be reckoned with from 1960 on."

Any comments on such things as prospects for more hogs (and lower prices), more broilers, more layers, fewer flock replacements, etc., and their effects on feed sales volume?

Manufacturers anticipate increases in tonnage to fill the feed needs of greater animal populations now forecast. However, less favorable feeding margins are expected to make feed sales more difficult later in the year. Continued price problems are foreseen by some manufacturers in the broiler areas.

Here are some of the replies:

Multiple-unit firm: "Volume should continue to increase first half year. Lower prices could effect tonnage beginning in last half, especially last quarter of calendar year."

Midwestern firm: "Lower hog prices next fall will reduce hog feed tonnage more than the reduction in hog numbers."

Midwestern firm: "Will not effect our volume."

Southwestern firm: "More broilers, more feed, more bankrupts."

Southwestern firm: "We agree with the Feed Survey Report."

Southwestern firm: "Our hog and egg feed sales will show biggest increase, followed with cattle feeds and concentrates."

Multiple-unit firm: "Increased animal units should result in larger tonnage, even with somewhat lower prices.

Multiple-unit firm: "More hogs will consume more feed despite lower prices. Same on broilers and turkeys. Commercial layers and breeder flocks will consume as much—possibly a little more."

Midwestern firm: "Looks like there will be more hogs, more layers and the number of broilers will depend on the decisions of the contractors who are always bullish."

Midwestern firm: "1959 will be a year of declining feeding ratios, thus declining sales volume. Total volume for the year should be up 5 to 10%, with the first half up more and the last half down."

Midwestern firm: "Lower prices for hogs, lower prices for eggs, lower prices and a profitless year for broilers unless placements are reduced or chain stores market broilers at a higher price."

Southeastern firm: "We are engaged in a rather large broiler project, and plan to expand in this direction because of connections made with a hatchery to furnish us chickens, and the construction of our own poultry processing plant."

Southeastern firm: "Reducing broilers by 40%."

Northeastern firm: "We hope to feed more hogs, more layers and more flock replacements in 1959, but believe there may be some curtailment in broiler chick placements during the first half of the year."

West Coast multiple-unit firm: "We anticipate a less favorable egg-feed and meat-feed ratio for 1959, with increases in numbers very closely paralleling that projected by the advisory committee of the American Feed Manufacturers Assn.

Do you expect to ship more or less feed in bulk in 1959? About what percentage of your 1958 tonnage was in bulk?

Virtually all of the manufacturers expect to move a larger share of their tonnage in bulk in 1958, with some indicating plans for rather big increases.

The percentages of 1958 tonnages in bulk ranged all the way from virtually none to 97%. An average bulk percentage among the mills surveyed was about 25. (This was an average for the mills and not a percentage of all tonnage represented by the mills replying to the survey.)

As might be expected, the percentages of 1958 volume shipped in bulk varied a good deal by size and type of company and area served. Some of the larger, multiple-unit firms serving widespread markets and making full lines reported bulk tonnages within a range of about 10 to 30%. Some of the smaller firms, particularly in the Midwest, also did not have large amounts in bulk.

On the other hand, some mills serving local areas or specializing in certain types of feed had large shares of their tonnage going out in bulk. There also were area differences, of course, with some West Coast operations in particular having large bulk percentages. However, even some of the full-line, fairly large midwestern firms with dealer set-ups reported as much as 40% or more of their 1958 tonnage in bulk; apparently some of these have put particular emphasis on bulk feed programs.

How do you view the reported trend toward more complete feeds for livestock as well as poultry? In this connection, are you making complete pelleted feeds, including roughage, for cattle or lambs?

There was some variation in opinion on complete feeds for livestock, but most manufacturers look for a continuing increase. However, some felt that the trend would reverse itself with smaller margins for feeders.

Most indicated interest in complete feeds for ruminants which include roughage as well as concentrate. A few of the firms, particularly in some southwestern and western areas, are making these feeds. Some manufacturers discount the idea of this being done by commercial feed mills; others, as has been indicated previously, point out that it will have to be done close to the feeder.

Some manufacturers look for a concentrate trend to continue in grain areas, but some of them noted that much of the concentrate probably will be processed into complete feeds (possibly pelleted) at the local mixer level.

Following are some comments on the above questions:

Multiple-unit manufacturer: "Doing research on complete pelleted rations for livestock."

Multiple-unit firm: "Slight trend toward complete feeds in large specialized operations. Likewise trend toward use of more concentrates in grain areas. The two trends may balance out."

Multiple-unit company: "Unquestionably a stronger trend towards complete feeds."

One-plant midwest firm: "Trend is there but slow. Lower margins for feeders might reverse trend. Cannot economically make complete feed with roughage in central plant."

One-plant full-line firm: "Pelleting complete feeds now except for roughage. This will not develop unless done on the farm."

Midwestern firm: "Complete rations with roughage are coming in the next few years in this area."

Midwestern firm: "We still believe concentrates are better than complete feed."

One-plant firm: "There will be a tremendous increase in tonnage of complete feed. A big question is whether this will go out in pellets or granules or whether the local mixer will furnish this in bulk in mash form."

Corn-hog area firm: "Just completed an addition that is set up for complete pelleted feeds only in bulk."

Southwestern mill: "Making complete pelleted feeds for everything except lambs."

Southwestern company: "Small mixing operations using concentrates are increasing rapidly; most are mash."

Multiple-unit firm "We feel now complete feeds with roughage are advisable only in area of production; i.e., 50 miles of mill. Hope to add a small plant next year to test idea of smaller (100 tons per day) plant close to feeders."

Mountain states firm: "Make a large tonnage of lamb fattener."

Southwestern firm: "Trend offers prospect of greatly increased volume."

Southwestern firm: "Believe complete feeds with roughage for cattle and sheep are not practical."

Southwestern company: "Concentrates will ultimately control; can't defeat a local grain crop economically."

Midwestern firm: "Two distinct trends will continue—complete pelleted feeds and concentrates. But they are distinct only at feed manufacturing level—not in the feedlot, since more of the concentrates will be made into complete pellets by the dealer. Question is: Who can best process complete pelleted feeds—feed manufacturer or dealer? It will vary by area. But think about the point of processing if a stationary or portable pellet mill were offered to dealers at a price double that of today's custom mixer."

Southeastern firm: "Do not make complete pelleted feeds for cattle or lambs and do not plan to make them in '59."

Multiple-unit eastern and southeastern firm: "The trend to more complete feeds will gain momentum in our area."

Company serving East, Southeast: "Do not see a trend toward more complete feeds for livestock."

Eastern firm: "Have made complete livestock feeds for many years. Studying complete pelleted feeds including roughage."

West Coast firm: "See a definite market for complete feeds to offset high labor costs."

Western multiple-unit firm: "Trend toward more complete feeds will gain momentum. Roughages will be compressed in 1959 and will gain momentum from 1960 on."

West Coast firm: "This trend should increase volume."

Midwestern and southwestern firm: "Trend will be a tremendous boon to manufacturers in feeding areas."

What do you see as the principal problems and opportunities for dealers and local mixers?

Some manufacturers made flat predictions that dealers and local mixers, at least as they have been known, will disappear. Others see real opportunities for dealers and local mills if they do such things as serve larger areas, acquire more knowledge and know-how, render better service, maintain quality, provide bulk feed, and provide grinding and mixing and, in some cases, pelleting services. Many respondents said dealers would be eliminated unless they did provide services justifying their margins.

A principal problem, it seems, is in having enough working capital and providing required credit.

Here are some of the comments on this question:

Multiple-unit company: "Credit will be a problem—also quality and uniformity."

Multiple-unit firm: "Have great opportunities, but must improve services to justify margins."

Multiple-unit company: "Principal problems concern financing their operation."

Midwest firm: "Must work large territories and offer management counsel."

Midwest company: "Dealers unable or unwilling to gear up for bulk, provide sound advice and handle reasonable credit requests should quit now."

Northwest firm: "Opportunity is in grain operations."

Midwest firm: "Biggest opportunity is in processing complete feeds. Problem is financing the equipment."

Corn-hog area firm: "Must be able to custom mix and pellet grain efficiently into complete ration and deliver bulk."

Southwestern firm: "The feed dealer we knew has had his day. Local mixers managed properly will increase."

Western company: "Marginal dealers not equipped to do custom mixing will continue to disappear. Trend will continue to larger custom mix dealers that distribute bulk and do service work."

Southwestern firm: "Will find it difficult competing with mills going direct."

Southwestern company: "Looks like certain reduction in number of dealers, with volume going to strategically located, aggressive big accounts actually 'controlled' by manufacturing company."

Midwestern company: "Problems are limited business management ability and capital requirements for milling, pelleting, grain banking."

Southeastern manufacturer: "Local mixers merely a transition—will be cut in a few years."

Firm serving East, Southeast: "Local mixer will have to make better, more dependable feeds."

Eastern firm: "In certain types of feeding operations, still great opportunities for aggressive dealers and mixers."

West Coast firm: "Not familiar with dealer operations."

Western company: "Will diminish in importance as manufacturer moves plants closer to feeders. To survive, must diversify and improve service."

Southwest firm: "With integration, some dealers won't be able to remain competitive."

MARKETS

(Continued from page 2)

Most mills continue to receive corn by barge into Chattanooga, Tenn., or trucked out of Illinois and Indiana. Cottonseed meal is still a very scarce commodity, and from all indications it will be sometime in January before additional offerings will be made. Soybean meal continues to do fairly well, but no large purchases are being made.

Many cattle feeders have switched over to 45% peanut feed meal, as it is selling at approximately $10 ton under cottonseed meal and soybean meal. Citrus pulp prices remain unchanged and we do not see any pressure on this market until around Jan. 15.

Central States

The holiday season is a merry one for most feed manufacturers in the central states. The week ending Dec.

23 has been another cheerful one, business-wise, and this is added to a satisfactory fall season. The year 1958 is rounding out to be the best on record for most feed men in this area.

Orders continued to come in, even though normally a Christmas lull is apparent. At least one manufacturer in the region was not certain yet how long his work shift would be Dec. 26, even though he preferred to shut down at noon. He felt he might have to work longer. And, there were some ideas about calling the production forces back for the following Saturday.

Cold weather, the large number of animals on feed, building inventories, and upturning prices are given as reasons for the good run of feed business. The current high level of prices, however, are causing some uncertainty about the outlook for the next several weeks.

South Central

Formula feed demand was slower for most firms last week. Although total deliveries for December are expected to reach a record high, most of the business came in during the first two weeks. Since then, deliveries have been tapering off. Dealers have been inclined to delay buying in order to reduce floor stocks before the year end inventory.

Business is certain to turn upward again the last few days of the month and continue on the first week in January. A fair total of carlot orders has been accumulated from buyers who want shipment delayed until after the Jan. 1 visit of the tax assessor. Mill spokesmen are uncertain about prospects after these carlot orders have been taken care of.

The slower trade has not affected mill running time as yet as most plants have continued on a five day, two shift basis. A two day shut-down has been planned for the Christmas holiday.

Ohio Valley

Sales of formula feeds this week in the Ohio Valley continued at a lively pace, and appeared likely to close out the year with tonnages far beyond those recorded for any of the last eight years. In fact, the demands created by necessary under-cover feedings due to the continued near-zero weather has made it impossible for area manufacturers to build up any backlog of year-end inventories. As a result, these will be negligible compared with the year-end situations during the last decade or so. But that is a situation about which no complaints are being voiced.

Naturally, the abnormal indoor feeding requirements not only are resulting in much heavier-than-usual orders for formula feeds, but are rapidly depleting the heavy carryover of fall farm feeds, thus further improving the outlook for spring feed volume sales during the coming late winter and early spring feeding period.

Some manufacturers are of the opinion that the early spring market for broilers and fryers will be somewhat below average because of the current lower prices, while others are as firmly convinced that because of the generally prosperous overall situation, there will be but little if any cutback in poultry production.

Currently, all area mills are on full five-day production schedule, with numerous plants maintaining six-day schedules on three shifts. While some ingredients continue in short supply, the previous scarcity of others was eased somewhat this week, and the market was holding steady, with prices advancing only a nominal 50 @75¢ ton.

Mountain States

The general opinion among the formula feed dealers in the Rocky Mountain area is that the past week's feed sales are very much stronger than the previous week and up tremendously from the same time a year ago.

Range feed, drylot feed, and sheep feeds have been getting the most demand in this area and are up considerably from last week. The reason is an increase in numbers of sheep and cattle in the feedlots.

Most of the formula feed sales have been going to dealers for immediate sale rather than for inventory buildup.

Pacific Northwest

Immediate and prompt shipment supplies of important feed ingredients ruled at firm to stronger prices during last week's Pacific Northwest feedstuffs market despite a traditionally slow pre-holiday demand. Listings for some feed grains were quoted slightly lower with corn and milo offerings more liberal and demand seasonally dull.

The general ingredient demand was narrow as feeders and mixers were reportedly fairly well covered for the next 30 days.

Formula feed movement continued good as mills filled earlier orders. All poultry feeds moved in volume amounts while dairy feeds accounted for a moderate tonnage.

Wheat millfeed quotes gained $1 to $2 ton, but the trade indicated slow dealings as a reflection of a limited demand for currently small offerings.

Oilseed meal markets carried further strength in front of sharp advances for cottonseed along with a small soybean meal price gain.

Barley, corn and milo listings were mostly 50¢ ton lower during the trading period.

Portland producer paying prices for eggs held unchanged during the week despite a 1 to 2¢ doz. gain at the wholesale level.

Live poultry prices held unchanged except for a 1¢ advance in heavy hen prices to the producer.

The fed steer market at North Portland was stronger with prices gaining 25 to 50¢ cwt. Choice steer of popular weights topped out at $28.35.

INDEX OF ADVERTISERS

The index of advertisers is provided as a service to readers and advertisers. The publisher does not assume any liability for errors or omissions.

Abbott Laboratories
Agricon, Inc. 61
Agri-Tech, Inc.
Albers Milling Co.
Albumina Supply Co. 50
Allied Chemical Corporation, Nitrogen Division
Allied Mills, Inc.
Ajtman, Singleton & Co. 78
Amburgo Co., Inc.
American Agri. Chemical Co.
American Cyanamid Co. 53
American Dehydrators Assn. 16
American Elev. & Grain Div. 39
American Mill Serv. Co.
American Poultry & Hatchery Fed.
Anderson Box Co. 66
Andersons, The
Anderson, V. D., Co. 30
Arbor Acres Farm 79
Archer-Daniels-Midland Co.
Arkansas Rice Growers Coop. Assn.
Arkell & Smiths
Armour & Co. 47
Armstrong, O. B., & Son
Aubrey Feed Mills

Babcock Poultry Farm, Inc.
Bacon, Edward R., Grain Co.
Baker, H. J., & Bro.
Baker, J. T., Chem. Co.
Barnard & Leas Mfg. Co., Inc. 7
Baroid Division, National Lead Co.
Bartlett, C. O., & Snow Co. 50
Barton Salt Co., The 20
Bates Grain Co.
Baughman Mfg. Co., Inc.
Baxter, A. E., Engineering Co. 11
Bayou Molasses Co.
Beardstown Mills
Bemis Bro. Bag Co. 41
Berg, Paul
Bigelow Sales Co.
Bingman Lab., Inc.
Black, Sivalls & Bryson, Inc.
Blatchford Calf Meal Co. 76
Blomfield-Swanson
Borden Company 21
Bosworth Commission Co.
Bowman Feed Prod., Inc. 42
Brewers Yeast Council, Inc.
Brower Manufacturing Co. 62
Brown, Fred G., Pulv. Co.
Bruce Milling Co.
Burrell, James H., & Co., Inc.
Burrows Equipment Co. 81
Burrus Feed Mills
Butler Chemical Co. 67
Butler Mfg. Co.

C-K Processing Co.
Calcium Carbonate Co. 24
California Pellet Mill Co.
Caple, A. B., Co. 27
Carey Grain Corp.
Cargill, Inc. 62
Carson Food Co.
Champion Portable Mill Co. 12
Chantland Mfg. Co. 39
Chase Bag Co. 57
Checkerboard Grain Co. 46
Citrus Processors Assn.
Cleveland Vibrator Co., The 76
Clinton Corn Processing Co.
Clofine, Herbert K. 63
Colby Milling, Inc. 39
Collier Livestock-Feeder Co.
Colonial Poultry Farms
Columbia Phosphate Co. 79
Columbia Quarry Co. 81
Columbian Steel Tank Co.
Commercial Solvents Corp.
Consolidated Blenders, Inc. 85
Consumers Soybean Mills
Continental Grain Co. 85
Corn Products Sales Co.
Coronet Phosphate Co. 48, 49
Cottingham & Butler Ins. Service, Inc.
Crete Mills
Cromwell Paper Co.
Crown Zellerbach Corp.
Czarnikow Rionda

D. C. A. & Co.
Daffin Mfg. Co. 43
Dannen Mills, Inc. 77
Davis, H. C., Sons' Mfg. Co.
Dawe's Laboratories, Inc. 9, 90
Day Company, The
Daycom, Inc. 34
Delaware Poultry Laboratories
Devold, Peder, Oil Co. 30
Diamond V Mills, Inc.
Distillation Products Industries 51
Distillers Feed Research Council 69
Doane Agricultural Service
Dorsey Trailers
Doty Laboratories
Douglas Chemical Co.
Duplex Mill & Mfg. Co. 25, 26
Du Pont de Nemours & Co., Inc., E. I.

Early & Daniel Co.
Eastern Stock Food Co.
Eastman Chemical Prod., Inc.
Ehrsam, J. B., & Sons Mfg. Co., The
Elam Grain Co.
Eriez Mfg. Co.
Eschenheimer, Rudy, Co.
Eshelman, John W., & Sons
Ewing, Ray, Co. 11

Farm Journal
Farmers Friend Mineral Co. 42
Farmers Mutual Hail Ins. Co. of Iowa
Farmers Union Grain Terminal Assn.
Feed Service Corp.
Fischbein, Dave, Co.
Flavor Corp. of America 3, 46
Flour Mills of America
Food Mach. & Chem. Corp.
Forster Mfg. Co. 33
Fox Co. 65
Fruen Milling Co. 52

Gaddis Bros. Mfg. Co.
Geerlings Feed Mills
Gerber Sheet Metal
Glidden Co., The
Gorton-Pew Fisheries 57
Grace Chemical Co.
Grain Processing Corp. 19
Grand River Chem.
Griffith Labs., Inc. 66
Gump, B. F., Co.

Hallet & Carey Co.
Hand, Peter, Foundation 27
Hardy, H. E., & Co.
Hardy Salt Co.
Harris-Crane, Inc.
Harris Lab.
Harshaw Chemical Co.
Hawthorne Co.
Hayes and Stolz
Haynie Menhaden Prod., Inc. 61
Heard-Kinard-Smith, Inc.
Heck, Edward J., & Sons Co.
Heil Co., The
Helm Manufacturing Co.
Henderson Mfg. Co.
Henke Mfg. Co.
Hercules Powder Co.
Hess & Clark, Inc.
Heterochemical Corp. 78
Highway Equipment Co. 74
Hilltop Laboratories
Hoffmann-La Roche, Inc.
Hoffman-Taff, Inc. 61
Hogenson Const. Co.
Hogg, N. D., Ltd. 81
Holt Products Co.
Homer Mfg. Co., Inc., The
Honeggers' & Co. 14
Honeymead Products Co.
Hot Spot Detectors, Inc.
Howes, S., Co. Inc.
Hubbard Milling Co.
Hudson Pulp & Paper
Hubbell, Charles H.
Hygeno Litter Co.
Hyline Poultry Farms

Ibberson, T. E., Co. 50
Illinois Soy Products Co.
Industrial Commodity Corp.
International Harvester Co.
International Machinery Dev. Corp.
International Minerals & Chemical Corp. 13
International Paper Co.
International Salt Co., Inc.
Interstate Chemical Products.
Iowa Limestone Co.
Iowa Portable Mill Co.

Jackson, Gilbert, Co., Inc.
Jacobson Machine Works 29
James Mfg. Co.
Jefferson Chemical Co.
Jersee Co. 81
Johns-Manville
Jones-Hettelsater Const. Co.

Kansas Soya Prod. Co., Inc.
Kees & Company 39
Kellogg, Spencer, & Sons, Inc.
Kem Mfg. Co.
Kemp, C. M., Mfg. Co.
Kent Feeds
Kent, Percy, Bag Co., Inc.
Key Alfalfa Dehydrators 75
Keystone Steel & Wire Co.
Kilby Steel Co.
Kindstrom-Schmoll Co.
Koelsch, Charles J., Grain Co.
Koppers Co., Inc.
Kraft Bag Corp. 55
Kraft Foods Co. 68
Kuss, R. L., & Co., Inc.

Laboratory Construction Co. 65
LaBudde Feed & Grain Co. 39
Lakeland Eng. Eqpt. Co.
Land O'Lakes Creameries, Inc.
Landers Mill Mfg. Co.
Lathrop's Hatchery, Inc.
Lauhoff Grain Co. 11
Leach Mfg. Co.
Leftwich, J. H., & Co., Inc.
LeGear, Dr., Inc.
Lennox Industries, Inc.
Levens Mlg. Co.
Lilly, Eli, & Co. 45
Lima Armature Works
Limestone Products Corp. of America 30
Loncala Phosphate Co.
Longhorn Eng. Co.

McCabe Grain Co., Ltd.
McCall, Tom, & Associates, Inc.
Magnus, Mabee & Reynard.
Maney Bros. Mill & Elev. Co. 4, 84
Manganese Chemical Corp.
Marco Chemical Co. 44
Martenis, C. J., Grain Co. 81
Martin, Theo. W., & Son
Mathews Co.
Mayo Shell Corp. 61
Merchants Chemical Co., Inc.
Merck & Co.
Mid-America Mlg. Co.
Mid-Continent Grain Co. 50
Midland Western
Midwest Alfalfa Co. 58
Midwest Dried Milk Co. 54
Milbrew Co.
Mill & Elevator Co.
Miller Manufacturing Co.
Miller, Mel, & Co., Inc.
Miller, Publishing Co., The
Minneapolis Sewing Mach. Co.
Minnesota Linseed Oil Co. 39
Minnesota Specialty Co., Inc. 61
Monsanto Chemical Co.
Mooers Mfg. Co.
Motomco, Inc.
Morton Salt Co. 71
Murphy Products Co.
Myers-Sherman Co.

Nagel, Herman, Co. 82
Natl. Alfalfa Dehydrating & Mlg. Co.
Natl. Distillers Prod. Co.
National Feed Ingred. Assn.
National Lead Co.
National Molasses Co. 65
National Renderers Assn. 82
National Turkey Federation
Underwriters
National Vitamin Products Co.
Nellis Feed Co. 62
New Century Co., The 62
New England By-Prod. Corp. 57
Nichols, Incorporated
Nootbaar, H. V., & Co.
Nopco Chemical Co. 24
North American Mfg. Co.
North American Trading & Import Co.
North Carolina Granite Corp. 15
Northwest Brewers Yeast, Inc.
Nor-Vell, Inc.
Nutrena Mills, Inc. 62

Oakes Mfg. Co.
Olavarria & Co., Inc. 61
Oyster Shell Corp. 46
Oyster Shell Prod. Co. 40

Pabst Brewing Co.
Panogen Co. 34
Paper-Calmenson & Co.
Park, Philip R., Inc.
Parks, J. P., Co. 7
Parrish & Heimbecker
Parrish, N. K.
Paxton Processing Co. 81
Pay Way Feed Mills, Inc.
Peavey, F. H., & Co. 79
Peerless Equip. Co., Inc.
Permco Mfg. Co.
Peterson Sales, Inc.
Pfizer, Chas., & Co. 35-38
Phelps Dodge Refining Corp.
Pillsbury Co., The
Pittsburgh Plate Glass Co.
Plass & Sheahan
Power Curve Conveyor Co.
Prater Pulverizer Co. 81
Pratt Labs., Inc.
Productive Acres Mfg. Co. 46
Publicker Industries, Inc. 59

Quaker Oats Co.
Quisenberry Mills

Ralston Purina Co.
Rapids Machinery Co. 82
Raymond Bag Corporation
Read, Gladwin A., Co.
Red River Alfalfa Co.
Red Star Yeast & Prod. Co.
Rees Blow Pipe Mfg. Co.
Reliance Feed Co.
Rhodia, Inc.
Richardson, James, & Sons 33
Richardson Scale Co.
Riley Feed Co.
Rion Crush Stone Corp.
Ripco, Inc.
River Rest Turkey Sales, Inc.
Robinson Conveyor Systems.
Rohloff Bros., Inc.
Rolfes Grain Aeration Cos.
Roskamp Huller Mfg. Co., Inc.
Rosner-Hixson Laboratories
Ross Machine & Mill Supply.
Ross Mfg. Co.
Ryde & Co. 77

S. & H. Lab.
S & O Products
St. Regis Paper Co.
Salsbury's, Dr., Labs. 17
Save-Way Feed Mills
Scanlan, Ivan, & Co.
Schenley Distillers, Inc.
Schuster-Wise Gr. & Feed Co.
Schutte Pulverizer Co., Inc.
Scroggins Grain Co. 15
Seagram, Joseph E., & Sons, Inc. 31
Seco, Inc.
Sedberry, J. B. 79
Seedburo Equipment Co.
Service Bureau Corp.
Sheahan, Robert F.
Shell Chemical Co.
Shellbuilder Co. 63
Shuford, J. C. 70
Siavert, C. W., & Associates 29
Simonsen Mfg. Co.
Sioux Products
Small, The W. J., Co. 5
Smith, A. O. 44
Smith, Edward E., & Co.
Soft Phosphate Research Inst.
Sohio Chemical Co.
Soluble Nutrients, Inc.
Southwest Mill Supply Co.
Sparks-Waters-Farnen, Inc.
Special Products, Inc.
Specifide, Inc.
Spencer Kellogg & Sons, Inc.
Sprout, Waldron & Co., Inc. 14, 15
Squibb, E. R., & Sons
Stabilized Vitamins, Inc.
Staley, A. E., Mfg. Co.
Staley Milling Co.
Standard Brands, Inc. 44, 63, 70
Standard Feed & Fert., Inc.
Stauffer Chemical Co.
Stearns Magnetic Products
Stephens-Adamson Mfg. Co.
Sterwin Chemicals Inc.
Stone Mountain Grit Co. 22, 23
Strong-Scott Mfg. Co.
Sudenga Industries
Sunset Feed & Grain Co. 68
Superior Feed Co.
Swanson, Carroll, Sales Co.
Swift & Co.
Syntha Lab.

T. D. F. Company
Taste Engineering, Inc.
Texas Mill Equipment Co.
Thayer Scale Corp.
Thomer Equipment Co.
Thompson Printing Co.
Ti-Co Industries 86
Tobias Enterprises 60
Toxite Laboratories
Truck Grain Blower Co.

Ultra-Life Laboratories, Inc. 73
Union Bag-Camp Paper Corp.
Union Special Machine Co.
U. S. Industrial Chem. Co.
Universal Hoist Co.
Upjohn Company, The

Van Dusen Harrington Co. 79
Vantress, Chas., Farms, Inc.
Vitamins, Inc. 16
Vitaway, Inc.
Vitren Corp.
Vy Lactos Laboratories, Inc.

W-W Grinder Corporation 16
Wallace & Tiernan Inc.
Warren-Douglas Chemical Co.
Wells, Ralph, & Co.
Wenger Mixer Mfg. Co. 60
Wertz Feed Co.
Western Condensing Co.
Western Yeast Co. 76
West Virginia Pulp & Paper Co.
White Laboratories, Inc.
White Shell Corp. 27
Whitmoyer Laboratories, Inc. 29
Whitten Co.
Wilhoit Laboratory
Wilson & Co., Inc.
Wilson, R. S., Co.
Wirthmore Feeds
Wisconsin Alumni Research Foundation
Wooodward & Dickerson, Inc.

Younglove Construction Co.
Young, John F., Co.

Zellers' Laboratories 62

Now it takes ONLY HALF AS MUCH
to produce maximum growth

MORE CONCENTRATED
MORE CONSISTENT

a primary fermentation source of unidentified
GROWTH FACTORS

After six years of exhaustive testing, results prove NeoVite to be your best source for unidentified growth factors. Since 1952, when Dawe's Laboratories developed NeoVite, extensive feeding trials, both in the laboratory and under practical field conditions, established NeoVite's ability to stimulate growth above that expected from usual UGF sources. NeoVite's consistency to produce these results is a tribute to Dawe's Laboratories quality-control through biological testing.

Now, Dawe's Laboratories is proud to offer proven tested NeoVite in a more concentrated form. It actually takes only half as much to produce the same dependably consistent results. The advantages are obvious to every feed manufacturer.

Test New Concentrated, Consistent NeoVite *at our expense* . . . Write us for NeoVite product data. Dawe's will be pleased to supply NeoVite to you at no charge for your test purposes. There is no obligation.

World's Oldest and Largest Specialists in Vitamin Products for Feeds

Dawe's

Plants and warehouses strategically located throughout the United States to serve you without delay.

DAWE'S LABORATORIES, INC.
4800 South Richmond Street
Chicago 32, Illinois

FOREIGN OFFICES:
BELGIUM—13 Courte rue des Claires, Antwerp ITALY—Corso Magenta 81/83, Milan MEXICO—Sierra Leona 755, Mexico 10, D. F. VENEZUELA—Apartado 3050, Caracas